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AGRICULTURE

No. 1321

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USSR REPORT

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LIVESTOCK FEED PROCUREMENT

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LIVESTOCK FEED PROCUREMENT

PROVIDING FARM OPERATIONS WITH CUALITY CRASS SEED

Kiev SIL'S'KI VISTI in Ukrainian 22 Dec 81 p 2

[Article: "Quality Grass Seed for the Farms"]

[Text] In order to adopt scientifically substantiated rations in livestock feeding, in coming years perennial grasses should be sown to half of this republic's feed crop acreage, and they should play a primary role in intensification of meadow and pasture forage production. In connection with this, providing kolkhozes and sovkhozes with perennial grass seed in the requisite quality and variety assumes considerable importance. In this year's adverse weather conditions, 15,000 tons more of grass seed were produced than last year. The clover and annual grass seed situation is much improved this year.

The kolkhozes and sovkhozes in Chernigovskaya, Dnepropetrovskaya, Donetskaya, Poltavskaya, Kiyevskaya, and Krymskaya oblasts are preparing perennial grass seed for spring in a businesslike manner and on a high organizational and technological level. The farms in these oblasts have reached 85-92 percent plan fulfillment in laying away this seed.

As is indicated by figures from the UkSSR Central Statistical Administration, however, the situation is different on the farms of Ivano-Frankovskaya, Khmel'nitskaya, L'vovskaya, Khersonskaya, Chernovitskaya, and Khar'kovskaya oblasts, where seed is being readied extremely slowly, as a consequence of which the target for laying away seed has been met by only 34-50 percent.

Perennial Grass Seed Laid Away for Coming Year on Kolkhozes and Sovkhozes (situation as of 1 December 1981)

Oblast		Percentage of	Plan Target
Chernigovskaya			92
Dnepropetrovskaya			89
Donetskaya			89
Poltavskaya			86
Kiyevskaya			86
Krymskaya			85
Odesskaya			84
Zaporozhskaya			. 78
Nikolayevskaya			76

74
73
70
69
68
67
65
63
59
55
50
48
47
41
36
34

The problem is not that there is no seed. The farms of Ivano-Frankovskaya and Khersonskaya oblasts have laid aside only 35 percent of the gross harvest of perennial grasses; L'vovskaya and Krymskaya oblasts -- 45 percent; Zakarpatskaya Oblast -- 48 percent; Volynskaya Oblast -- 53 percent.

Managers and specialists on many farms in these and certain other oblasts are not devoting adequate attention to this important matter. And oblast and rayon agricultural agencies are not properly overseeing efforts to ensure fulfillment of the state plan target in the area of laying away high-quality grass seed. For example, while from 1 September to 1 December of this year the kolkhozes and sovkhozes of Odesskaya Oblast put away 720 tons of seed, and 300 tons in Zaporozhskaya Oblast, the figure was only 30 tons apiece in Nikolayevskaya, Volynskaya, and Chernovitskaya oblasts.

In order to lay away and prepare perennial grass seed in a prompt and timely manner for the spring planting, oblast and rayon agricultural administrations should take prompt measures to complete this work.

3024

CSO: 1811/13

LIVESTOCK FEED PROCUREMENT

CONIFEROUS TWIGS RECOMMENDED FOR LIVESTOCK FEED IN ESTONIA

Tallinn SOVETSKAYA ESTONIYA in Russian 9 Feb 82 p 1

Article by E. Ekhatamm, candidate of economic sciences and senior scientific worker at the Estonian Scientific Research Institute for Scientific-Technical Information and Technical-Economic Studies: "For Enrichment of the Winter Ration"/

Text/ Further development of animal husbandry is unthinkable in the absence of a balanced feed base or the presence in the ration of adequate amounts of proteins, fats, vitamins and mineral substances. In view of the fact that the past agricultural year was for us an unfavorable one, a search must be undertaken to isolate all possible reserves for supplementing the feed supplies and increasing their value.

One such reserve is that of ramal feed. It is obvious that such feed cannot replace hay and yet it does possess positive qualities which make it possible to compensate for the shortage in grass meal. We have sufficient material available for ramal feed. Studies have shown that only 50 percent of the overall bulk of each tree cut down is being employed for direct purposes, with the remainder being available to satisfy other needs. However, by no means is full use being made of this remaining material.

The forest is a tremendous accumulator of solar energy and a source of valuable raw materials for the national economy. The task consists of ensuring that not one scrap of wood is wasted. But we are still using our forest resources in a careless manner. For example, 80 percent of the organic bulk of sanitary fellings is being wasted. In the process, twigs -- a valuable feed for livestock -- are quite often set afire and thus the twig volumes used for feed are not very great.

It is important to know that the foliage of coniferous twigs can be used during a definite period of the year -- late autumn and winter -- since undesirable substances accumulate in them during the warm period of the year.

The use of ramal feed for large-horned cattle is not a new revelation. The use of wood that has undergone mechanical, thermal and chemical processing has been under study in our country since the 1930s. Studies have also been carried out abroad. In Canada, for example, wood scraps are processed by steam under great pressure. The organic acids which develop are neutralized by ammonia. The nutritional value of the product obtained is equivalent to the nutritional value of hay. It is recommended that such feed be used in the ration for large-horned cattle. It can

be fed to the animals in natural or processed form. 'Wood hay' is even procured during the summer, with use being made for this purpose of felled and seasoned deciduous shrubs.

Ramal feed contains large amounts of Vitamin E, carotene, ascorbic acid and mineral substances. Thus, ramal feed is not just an "emergency" solution for a difficult situation, but rather it represents an important and necessary source of additional feed for livestock. It is especially valuable in the sense that it promotes improved assimilation of other types of feed in the animals.

Two trends are presently being observed with regard to the use of wood as feed -retention of the tops of branches or the preparation of various products from the
foliage (chlorophyll paste, ramal meal and so forth) and obtaining feed from wood.

At kolkhozes and sovkhozes in our republic, where there is no preliminary preparation of wood or foliage for use, it is presently considered more advisable to commence the procurement and use of ramal feed. In the future, the production of feed products from wood can be entrusted to forestry farms and timber industry farms. Sufficient raw materials are available. We have great supplies of wood at our disposal. Roughly 15 tons of feed raw materials can be obtained from one hectare of cuttings. This reserve requires serious attention. The overall feed value of 1 kilogram of ramal feed -- 0.1-0.13 feed units.

The scientists have proven the effectiveness of use of twigs and ramal meal as a vitaminous feed for poultry and agricultural animals. When fed to the animals, these products serve to raise their appetites, greater weight increases are obtained and the vitamin content of milk is raised. As an illustration, allow me to cite some data obtained from scientific studies. Fine results were obtained from experiments carried out in the Chemistry Department of the Latvian Agricultural Academy on the use of chlorophyll-carotene paste as a feed for livestock. The paste was added to balanced feed in the amount of 0.02-0.05 percent. Over a period of 25 days, the weight increases in chicks exceeded 7-8 percent and the assimilability of protein substances increased by 14.1 percent compared to a control group.

At the Insitute of Microbiology of the Academy of Sciences for the Latvian SSR and at some other institutes, methods have been developed for obtaining feed from wood. It would not be out of place for this method to be introduced into operations in our republic.

When procuring and using ramal feed, it must be borne in mind that in order to prevent losses in the biologically active substances, the bulk obtained during the winter must be stored for no more than 20 days. The best results are obtained from materials which are used within 3 days following their procurement.

Estonia is rich in forests and they provide a great deal for the national economy. However, they could furnish even more if we utilize more fully the waste products of forest exploitation work and use in an intelligent manner the gifts of the forest for enriching the winter ration of livestock.

7026

CSO: 1824/170

LIVESTOCK

EFFECTIVE CAPITAL INVESTMENT FOR KAZAKH DAIRY COMPLEXES

Alma-Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 9, Sep 81 pp 60-63

[Article by K. Shaimbetov, candidate of economic sciences, and T. Bukeykhanova: "Dairy Complexes: The Effectiveness of Investments, The Agroindustrial Complex: Problems and Prospects"]

[Text] Recent years have seen substantial investment channeled into the development of Kazakhstan's agriculture. More than half of these appropriations have, significantly, gone for the construction of production facilities. Over the course of the Ninth Five-Year Plan period Kazminsel'khoz [Kazakh SSR Ministry of Agriculture] sovkhozes spent 238 million rubles for this purpose, 231 million over 4 years of the Tenth Five-Year Plan. It is therefore clear how urgent the task now is of doing everything possible to increase the economic effectiveness of the capital investments we channel into the formation of fixed production capital.

As of 1980 sovkhozes of the republic Minsel'khoz [Ministry of Agriculture] had 324 livestock complexes for milk production, 52 for beef production, 182 feedlots for year-round cattle-fattening operations, 162 complexes and lots for raising and fattening swine, 231 for sheep, 979 poultry facilities specializing in egg production and 853 processing poultry for meat.

Putting animal husbandry operations on an industrial basis has a beneficial effect upon the growth of the branch. It increases labor productivity, cuts production costs and increases returns on investment and production profitability overall.

Alma-Atinskaya Oblast has 11 dairy complexes. In 1979 profitability here averaged 20.6 per cent. Production costs were 24.6 rubles [as published]. Production of 1 quintal of milk required 5.8 man-hours and 1.3 quintals feed units. Per-cow milk yield was 2801 kg. Each 100 cows bore 71 calves. These are average figures. They are higher for some farms.

The Dmitriyevskiy dairy complex on the 40 Years of Kazakhstan kolkhoz has been in operasince 1979. In 1980 it was maintaining 1200 cows. The average per-cow milk yield was 3154 kg. The cost of producing 1 quintal of milk was 20 rubles. Direct labor costs were 4.2 man-hours, while profitability reached 68 per cent.

The Kaskelenskiy dairy complex in Iliyskiy Rayon has been in operation since 1976. Calculations were for 800 cattle with an average milk yield per head of 3500 kg of milk annually. The total production volume is 2800 tons.

As early as 1979 each of these 800 cows was giving an average of 3709 kg of milk. Production of each quintal of milk involved expenditures of 1.18 quintals in feed units and 5.5 man-hours. All this made it possible to achieve a per-quintal milk-production cost of 24.32 rubles and to raise production output per worker to 10,633 rubles (as compared with the 7847-ruble average for republic complexes overall). Profitability was 33.2 per cent.

These figures are evidence of the high effectiveness of capital investment channeled into the organization of milk production on an industrial basis. They also show, however, that we are far from exhausting all means of increasing the economic effectiveness of our capital investment in the republic's dairy complexes. Animal productivity is, accordingly, still frequently low, production costs high and the profitability of milk production operations low. In 1979, for example, the average milk yield per cow on 60 of the republic's complexes which were surveyed was 2568 kg. This was 655 kg below planned productivity. As far as gross milk production was concerned, these complexes had assimilated only 47 per cent of their planned capacity.

The dairy complexes of Tselinogradskaya Oblast have assimilated only 43 per cent of their planned capacity despite the fact that 11 of 13 of them have been in operation since 1976. The Yerkenshilikskiy complex has been operating since 1972, but as of 1980 it had assimilated only 44.6 per cent of its calculated milk-production capacity; the Karabulakskiy complex has assimilated even less--41 per cent. In 1979 the cost of producing 1 quintal of milk on the 13 complexes of the oblast averaged 33.75 rubles. Overall they closed out 1979 with losses. Profitability was a negative 9 per cent. The level of profitability of the milk-production operations on the Sandyktavskiy complex found expression in the figure of a negative 41 per cent (!)

Need it really be said that these figures are direct indications of the low overall effectiveness of the capital investments channeled into the construction of dairy complexes.

There are many reasons for this. But since the space afforded by a journal article is not unlimited, let us dwell upon three of the most basic ones.

Everybody knows that the organization of milk production requires, first of all, livestock, feed and facilities. Under the conditions associated with an industrial process these factors are inseparable. Capital investment should accordingly be channeled not only into the construction of basic livestock barns for maintaining our animals and utility buildings and structures for livestock care as is presently being done, but at the same time into the reproduction of productive livestock and the organization of a feed production system insuring that animals are fed their full standard ration.

At the present time, however, when we are talking about organizing milk production on an industrial basis, we are channeling our appropriations primarily into the construction of livestock barns. It has to be said that for this purpose we do spend unsparingly. But here's the problem: for the raising of heifers and noncalving young cows to stock our industrial complexes we either allocate no investment capital at all or in only purely symbolic amounts, which cannot solve the basic problems involved in reproducing our productive herd.

Where does this financial practive lead us? To only one result: facilities which have been readied can frequently not be filled with productive livestock suitable for milk-production operations functioning on an industrial basis.

Moldavia has been able to free itself of these distortions. The raising of noncalving young cows in single blocks with mechanized pasturing areas is coming to be an increasingly widespread practice. "The republic's dairy complexes are consequently increasingly getting highly productive cows raised in specialized enterprises. They now comprise 60 per cent of the herd in the kolkhoz-cooperative sector. To a substantial degree it is this which accounts for the fact that the annual milk yield per cow for the republic as a whole now exceeds 3100 kg."

As a rule, each farm runs its own herd reproduction operation in our republic. And employs traditional methods to boot. On one of their dairy farms sovkhozes will form a herd of calves collected from all the farms of a particular sovkhoz. The housing and feeding they receive are far from measuring up to the maintenance required for a complex to be able to run an industrial milk-production operation. It is not surprising that after being put into this environment to which they are unaccustomed these animals do not become highly productive.

It is today entirely clear that we need to put our cattle-raising operations on an industrial basis everywhere. The republic has already gained some experience with this, incidentally. The Novoishimskiy complex in Tselinogradskiy Rayon, Tselinogradskaya Oblast, was built in 1975, for example, to raise replacement calves. It sold 1858 non-calving young cows in 1979, 3055 in 1980. Of the total number of animals it sold in 1979, 553, or 24 per cent, were in the elite-record or elite category; the remaining 1064 were of the 1st-class category. But the experience gained from the operations of this complex associated with the raising of young cows has yet to be adequately disseminated throughout the republic.

In the meantime, the conversion of milk production to an industrial-based operation raises the problem of herd formation in a new way. Young noncalving cows should be raised in special complexes. These could be built on farms, but they could also take the form of interfarm complexes. This would depend upon the specific circumstances involved. The important thing is that they be able to meet the need for cows suitable for industrial milk-production operations on both existing and newly constructed milk-producing complexes and mechanized farms. Our calculations indicate that farms having 600-800 dairy cattle should also have complexes accommodating 350-450 head of noncalving young cows.

Violation of this principle is fraught with negative consequences. In June 1975, for example, the Il'inovskiy sovkhoz in Tselinogradskaya Oblast accepted from builders a dairy complex for 1100 cows and 60 calves. Its balance-sheet value is 2,850,000 rubles. In designing the complex, however, no provision was made for facilities for raising young cows, which has caused serious difficulties in the formation of a productive herd. Here are the figures for herd growth. In 1976 the complex had a total of 346 cattle. That is less than one third. In 1977 it had 722, 822 in 1978 and only 864 in 1979. As we can see, over a period of four years the complex has been unable to build up its livestock population.

The productivity of the cattle brought into industrial-based operations remains low. The average milk yield per head was 1882 kg in 1978, 1183 kg in 1979. Only 28 per cent of planned milk-production capacity has been assimilated. Nongraded production accounts for 90 per cent of that sold the state. The cost of producing I quintal of milk in 1979 was consequently 53.40 rubles. Profitability was a negative 44.4 per cent.

An integral part of the planning of capital investment for the construction of dairy complexes should accordingly be the allocation of resources for raising young replacement stock in specialized facilities and industrial complexes, which will contribute to

the formation of a high-quality dairy herd and at the same time constitutes one of the critical factors in increasing the effectiveness of capital investments. Only a "synchronous" method of raising heifers and young cows suited for industrial operations will create the conditions for intensive and timely reproduction of the productive part of the herd.

The experience farms in our republic as well as others have gained in raising heifers in special complexes indicates that in 15 or 16 months a young replacement animal has reached an age at which it can be inseminated. This makes it possible to produce calves from 24-25-month-old cows. As records show, on most dairy farms the number of heifers more than two years old increases with each passing year. By the beginning of 1980, their number on Kazminsel'khoz sovkhozes had risen to 406,000 head. Holding young replacement livestock too long like this and failing to transfer them to the basic herd at the proper time increases livestock costs and reduces profitability and the effectiveness of expenditures.

Raising livestock suited for maintenance in complexes i only part of the problem, however. It is also necessary to insure reliable supplies of livestock feeds. But we are neglecting to solve this problem in a timely manner. Practical experience shows that the technical-economic indicators employed in justifying construction of dairy complexes frequently incorporate sections such as planned capacity, annual production volume in terms of value as well as in physical terms, production costs, live labor cost per unit of production, estimated cost of construction with coefficient of local sitting, profit, payback and production profitability. At the same time, TEO [technical-economic validations] only rarely incorporate data on the costs involved in organizing a feed base. So each farm begins to look for ways to feed its livestock.

However, not all sovkhozes can provide feed for the cattle in their dairy complexes without additional expenditures for feed production. The conditions prevailing in Chimkentskaya, Dzhambulskaya, Alma-Atinskaya and Taldy-Kurganskaya Oblasts, for example, as well as the arid climate of northern Kazakhstan, where the feed base depends primarily upon field fodder production, require additional capital investment. This is necessary to prepare soil for irrigation and the construction of irrigation systems. In the south the exploitation of one hectare of irrigated land costs 1000-1900 rubles (not counting expenditures for intra- and interfarm water systems).

Computations show that to provide feed for 800 cattle with an average productivity of 3000-3500 kg of milk annually requires at least 400 irrigated hectares in feed crops. The preparation of an area of land this size for regular irrigation and the provision of livestock with good-quality feed in accordance with program requirements for a complex like this would require expenditures of 400-480,000 rubles. These expenditures, as well as herd-formation expenditures, should be taken into account in calculating the capital investment required for the creation of a complex. Only this kind of approach will bring an effective return on each ruble invested.

It cannot be forgotten that a place for a single animal costs 2900-3200 rubles on these complexes. This is 3-3.5 times greater than in the ordinary buildings on dairy farms of the republic's sovkhozes and kolkhozes. The problem of recoupment thus arises in this instance with particular acuteness.

But are we all now performing our financial calculations carefully enough? In Tselino-gradskaya Oblast, for example, 17 dairy complexes are only 78 per cent stocked with cattle. At the same time, though, the people here are stepping up the pace of their construction of new complexes. The branch is consequently sustaining losses not because

livestock cannot be accommodated, but rather because the existing complexes are not being stocked with animals. The gap is no small one. The oblast has accommodations for 227,000 animals and only 161,000 cattle.

Channeling resources into the expansion, modernization and re-equipment of production facilities constitutes an important factor in improving the economic efficiency of our complexes. Calculations indicate that expanding the capacity of existing cattle barns from 400 head to 800 would, as compared with the construction of new ones, reduce the cost of a single place by 29.9 per cent and shorten the payback period from 6.7 to 3.4 years. This should be kept in mind in planning capital investments.

Detailed calculations would of course require a study and evaluation of each facility, determination of the economic advantage to be derived from expanding or modernizing one operation or another and establishing the requirement for financial, machinery and equipment and labor resources. The results of such a study would make it possible to determine specifically for each farm, rayon, oblast and republic the capital investment required for future fixed capital reproduction. Specifically and realistically taking account of all factors insures effective utilization of capital investments in animal husbandry.

FOOTNOTE

1. "Biological Rhythms of the Industrial Farm," SEL'SKAYA ZHIZN', 28 December 1980.

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CSO: 1824/85

LIVESTOCK

UDC 636.08

IMPROVEMENT IN REPRODUCTION, PRESERVATION OF YOUNG STOCK CALLED FOR

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 12, Dec 81 pp 34-36

[Article by V. Shipilov, corresponding member of VASKhNIL, professor of the Moscow Agricultural Academy imeni K. A. Timiryazev: "Decisively Improving the Reproduction of the Herd and Keeping Young Animals"]

[Text] A task has been set for animal husbandry works: in the next few years to increase the average annual milk yield per cow on the kolkhozes and sovkhozes to 3000kilograms, and in regions with developed dairy farming—to 4,000-5,000. The task is quite realistic, but difficult. In order to achieve what has been earmarked, they must arm themselves more strongly with the achievements of science and advanced practice. In particular, as was emphasized in the materials of the 26th CPSU Congress, it is necessary to decisively improve the work for the reproduction of animals and the maintenance of the young livestock.

How can one speak of the profitability of dairy farming when there are kolkhozes and sovkhozes which annually fail to obtain 30-40 and more calves from each 100 cows, and the heifers that are to replenish the herd for reproduction go for years without producing young or even milk? Thus on the farms of the Central and central chernozem regions of the RSFSR last year 25-38 percent of the heifers over two years of age were not inseminated.

The losses caused by this barrenness exceed all of the losses caused to animal husbandry by infectious and noninfectious diseases. And, unfortunately, in many oblasts they do not take proper notice of this extremely abnormal phenomenon which is repeated from year to year.

In a number of places they now pay less attention to the organization of the reproduction of sheep and hogs. On the farms of Ryazanskaya, Bryanskaya, Kaluzhskaya and Smolenskaya oblasts in 1981 they obtained only 48-50 lambs from every 100 ewes and only 10-12.5 piglets from each basic sow.

Such utilization of the breeding herd inevitably leads to a sharp reduction in the production and sale to the state of farm products. At the same time every oblast, kray and republic has farms which achieve a high output of young. For example, the Rodina Kolkhoz in Orenburgskaya Oblast annually obtains 105-112 and more calves from each 100 cows. All farms should adopt the practice of these leading workers.

Practice and special research convincingly show that the basis for the creation of healthy herds that are distinguished by longevity, high fruitfulness and productivity is intensive raising of the replacement females and their productive insemination at the optimal times (heifers—no later than 16-18 months of age, sows—9-10 months and ewe lambs—12-18 months). But it is also possible to accelerate reproduction. On the Gorshikha breeding farm in Yaroslavskaya Oblast, for example, 24-25 month—old animals have already been producing young for many years. Moreover, the calves are normal and the milk yields are high—4,000 kilograms and more.

The work for obtaining strong young, preventing barrenness and low productivity of animals should begin with correct selection of the parent pairs. Statistics show that up to 15 percent of the calves from certain bull sires are unviable or very weak. When selecting heifers for breeding it is necessary to take into account the productivity of their mothers. One must be especially careful in mating replacement heifers with bull sires of large breeds, keeping in mind the difficult births which frequently lead to various complications and even to death of the newborn animals.

A decisive path to intensification of reproduction and prevention of barrenness of all kinds of agricultural animals is to bring the births closer together, that is, to inseminate them in the first months after the birth and to obtain young from each cow every 10.5 months, from sheep--6 months, and hogs--4.5-5 months. This way there is a real possibility of increasing the annual output to 110-115 and more calves from every 100 cows, to 25-30 piglets from every sow, and to 300-350 lambs from 100 Romanov ewes. But even this is not the limit. On the sheep farm of the Krasnogorskaya poultry yard in Moscow Oblast for example, these indicators were surpassed--for a number of years the output of young Romanov lambs amounted to 530-570 head.

From every 100 cows, 100 calves--one might say that every farm is capable of fulfilling this task. And this is the minimum of young: after all some of the cows calve twice during the course of the year (in the first and fourth quarters) and 2-3 percent of them produce twins.

As our many years of research have shown, bringing the births closer together strengthens the organism, prolongs the life of the animals, contributes to increasing the output of young and increases milk productivity: the milk days are distributed more efficiently throughout the year (240 days of current lactation plus 60-65 days of periodic lactation). Continuous 240-day lactation is not exhausting and does not wear out the animal's organism. Leading animal husbandry workers take all this into account: by inseminating the cows as soon as possible after the births they obtain additional calves and high milk yields. The pattern here is simple; the more calvings, the more cows and the more days with high milk yields, the more milk that is produced and the less expensive it is. Thus the milkmaid A. Isayeva of the Put'k kommunizmu near Moscow in 1980 obtained 120 calves from every 100 cows and an average of 6,260 kilograms of milk from each cow.

But what impedes the intensification of reproduction? There are many factors. One of them is related to the shortcomings in feeding which is brought about by

the shortage and poor quality of forage—hay, silage and haylage. This kind of feeding has an especially negative effect on the sexual functions of the young animals and growing calves (retardation of sexual maturity, alimentary infantilism). What can one say about artificial "miraculous" stimulators that propose to eliminate barrenness on farms where the cattle are not given a sufficient quantity of full-value feeds during the stabling period and have poor pasture during the summer?

In recent years there has been a sharp increase in the proportion of concentrated feeds in the ration of the cows, reaching an average of 600 grams per liter of milk, and there has been no justification for this. With this quantity, even in combination with a large ration of malt residue and brewer's grains, there is inevitably a severe disturbance of the cows' metabolism, irreversible pathological processes in the sexual and other organs, various birth and prenatal complications (retention of the placenta and endometritis), poor-quality young are born, and the life span of the cows decreases sharply.

Barrenness of animals is a complex biological phenomenon, and one can never underestimate the significance of the feed factor in its origin, but one should not overestimate it either. After all, even on a single farm with absolutely identical feeding levels, there can be groups of cows that produce good and poor young and have high and low milk productivity.

Practice shows, for example, that by giving the cows active exercise during all periods of the year (before birthing and within three or four days after birthing), it is possible with the same feeds (because of their better assimilation and the considerable strengthening of the health of the animals) to increase the output of calves by a minimum of 12-14 percent and to raise the milk yield by 350-400 kilograms, with an overall annual productivity of 3,000 kilograms.

Active movement replaces all therapeutic preparations taken together, especially in combination with natural heat of the sun—the main free source that has a favorable effect on the animal's organism. One can only regret that this powerful factor of the external environment, without which there can be no normal metabolism in the organism, high output of strong calves or full-value productivity, is clearly underestimated and frequently completely ignored. In organizing regular active exercise of cows at any time of the year, it is expedient to take advantage of the experience of a number of sovkhozes of Moscow Oblast (Moskovskiy, imeni Lenin), where they construct special three-kilometer paved exercise areas.

During the winter stabling period, which lasts for 180-210 days on an immense territory of our country, the organisms of the animals experience a shortage of light, especially ultraviolet rays. Under the conditions of the nonchernozem zone, during the stabling period the cows receive only 12 percent, and in December and January only 2-4.5 percent of the required doses of ultraviolet radiation. Therefore, as is shown by the many years of experience of the Pamyat' Il'icha Kolkhoz, the Kolkhoz imeni Lenin, the Kolkhoz imeni Timiryazev and other Moscow area enterprises, a good effect is produced by using IKUF-1 electrical devices. Infrared and ultraviolet radiation strengthen the organisms of the animals, have a favorable effect on the development of the young, and significantly reduce the microbe

pollution in the air in the barns of the cows and calves. It is no accident that on farms where active motion is combined with ultraviolet radiation during the stabling period the output of calves is high and practically none of them die.

The complexity of the problem under consideration is also shown by the fact that even with the most favorable conditions for their existence, it is impossible to prevent barrenness of cows if the rut heat is determined incorrectly or handled incorrectly, if poor-quality sperm is used, if the specialists who organize the reproduction are not highly skilled, or if there is no control over insemination.

Figuratively speaking, while in crop growing plantings take place once or twice a year, in dairy farming it is necessary "plant" each day and sometimes even two or three times a day. And still these "plantings" sometimes do not produce "shoots." It is precisely in the organizational part of the matter, which does not depend on the animal's organism, that we now find the main reasons for the low output of young.

With the changeover of animal husbandry to an industrial basis, the problems of intensification of the reproduction of the herd and prevention of diseases of the mammary gland and of the newborn young have become especially crucial: it is as though many zooveterinary measures that have proved to be good are not included in this technology, and one cannot always even apply them. But even here domestic science and advanced practice have found a successful solution by developing the shop system of reproduction of the herd at complexes and on large dairy farms. I have in mind the flow line-shop system of milk production which was approved by the CPSU Central Committee, whereby four shops are created depending on the physiological conditions of the animals: for dry cows, the birthing shop (division), the shop for insemination and increasing the milk yield, and the production shop.

Good preparation of the cows for birthing is the main task of the shop for dry cows. Full-value feeding and maintenance (active motion, a good microclimate), and dispensary service for pregnant animals guarantee their subsequent high fertility and productivity, the normal development of the offspring and biologically full-value colostrum—a powerful means of preventing diseases in newborn young and increasing their overall resistance.

Births take place in the birthing section where there are prenatal and postnatal sectors with individual stables, boxes for births and facilities for veterinary-sanitary treatment of the animals. The cows are given sanitary treatment 5-6 days before birthing. After this they are transferred to the prenatal sector, and for 12-24 hours before birthing, to boxes where the animals are not tied up so that they can freely select a physically comfortable position for the birth. The births take place more rapidly in this quiet, peaceful situation and, as a rule, without complications. And the most favorable conditions are created for the calf as well as the mother: for 45-60 minutes the mother licks it carefully, it stands up sooner, and the food reflex appears in it earlier. This is promptly manifested in the physical (natural) way--by sucking. And this is most important in increasing the immune resistance of the newborn animals. The sooner the newborn calf receives his first portion of colostrum, which is rich in gamma globulin, lysozyne and other vitally important components, the less the danger that it will fall ill.

And it is precisely the belated receipt of colostrum (inevitable with the old birthing technology)—and the food reflex, as they say, will not wait—that leads to a situation where the calf licks other objects and pathogenic microflora enter the digestive tract. This results in dyspepsia and a large number of deaths of newborn animals.

It has been established that calves which are left with their mothers for 3-5 days, with the mothers being milked no less than three times a day, have much less dyspepsia and in a less severe form, and they grow more rapidly. This is also advantageous for the mother cows. Carefully licking the newborn, they swallow the placenta water, which is rich in biologically active substances (carbohydrates, proteins), which, in combination with the repeated nursing of the calf, significantly steps up the contraction of the uterus, as a result of which the placenta is ejected more rapidly and endometritis and other diseases are prevented. Moreover, the swelling of the mammary gland disappears and there is no mastitis which is usually found during the first days of the postpartum period.

After five days and with mass births, sooner, the cow is transferred to an individual stable of the postpartum sector where she is kept for 8-10 days, and the calf is transferred to the preventive medicine section. The vacated box is cleaned, washed, disinfected and dried; and the litter material is disinfected with an aerosol bactericide.

During the first two weeks after birth the calves are kept in the veterinary dispensary, with no more than 20 head per section. The newborn animals are kept for 2-4 days in each section, and there must be no less than four sections. If during this time a section is filled (according to the cyclogram), they begin to fill the next one. When the calves are fourteen days old they are transferred to the calf barn or shipped to other tarms for completion of raising.

Filling the sections of the veterinary dispensary primarily with animals of approximately the same age makes it possible to create the best microclimate, and to sharply reduce the concentration and degree of virulance of conventionally pathogenic microbes, which prevents diseases.

The calves are fed their mother's milk from nipple fountains, and later a mixture of the milk of the cows that are in the postpartum sector. When the weather is good the newborn calves are put outside in cattle yards.

This technology for obtaining and maintaining calves is quite acceptable both in a modern dairy complex and on a reconstructed old farm. The Russian Federation has 100 farms where, after the introduction of this technology, dyspepsia of newborn animals decreased significantly and the cows had fewer cases of various natal and postpartum complications and diseases of the mammary gland.

After careful examination, the cows are transferred from the birthing section to the shop for insemination and increasing milk yield. The main task of this shop is to successfully inseminate them during the first month after birthing. To this end, the postnatal period is supervised and the cow's organism is aroused for rut heat. Many methods are recommended here, but the primary one should be the powerful natural effects: full-value feeding, active motion in combination with

exposure to the sun, and physiological stimulation of the sexual function through the utilization of functional young test bulls.

The natural methods of postpartum stimulation of the sexual function should be combined with compulsory gynecological veterinary service, moderate milking, correct machine milking and, on medical instructions, the utilization of a 7-percent solution of ichthyol in a 40-percent solution of glucose in a dose of 10 milliliters (intramuscular) on the third, seventh, tenth and fourteenth days, as well as colostrum from the first milking.

Postpartum activation of the sexual function of cows with a young bull (morning and evening, no more than every 1.5-2 hours, beginning with the third or fourth day after birthing) not only accelerates the appearance of the clearly expressed full stage of arousal of the sexual cycle (sexual heat, sexual arousal, rut and ovulation), but also guarantees correct determination of the moment of insemination. All this makes it possible to increase productivity and reduce the time periods of barrenness.

Cows that are in rut can is inseminated immediately, and within 10-12 hours (when they are in rut) they can be inseminated again. This device increases the productivity by 9.7-13.5 percent.

From the tenth through the thirteenth day after insemination the young bulls are again put in with the cows so that, in case they are not pregnant, the condition of sexual rut will not be missed again. The final results of insemination are made more precise after 1.5-2 months by the rectal method.

It should be emphasized that the testing of the cows in rut, the timulation of the sexual function and the checking for the effectiveness of the insemination of the young bull should be conducted under the supervision of experienced animal husbandry workers (in the morning, at noon and in the evening) with the constant supervision of zooveterinary specialists. This is responsible work and without it it is impossible to avoid prolonged barrenness or to achieve a maximum output of young animals. But it is justified: expenditures on feeding and maintaining the young bulls are recouped not only through additional young animals, but also through the sale of the animals themselves for meat after they have been used for a year and a half.

It is very important to carry out artificial insemination with high-quality sperm, and in quiet, peaceful surroundings in well-equipped operations points. Insemination is a complex gynecological operation and it can be carried out successfully only by highly skilled specialists who know veterinary gynecology well. In places that do not have the proper conditions for guaranteeing a high output of offspring with artificial insemination it is necessary to utilize sire bulls correctly through natural insemination.

Only pregnant cows enter the production shop. Active exercise is mandatory for them here. The task of this shop is to produce milk while maintaining the normal health of the animals and to check on the condition of the mammary gland and steam up the cows promptly and correctly.

Only daily, planned implementation of a complex of agrozooveterinary organizational measures which include effective means of treating the animals, a well-arranged system of insemination and material motivation of the people for high output and maintenance of offspring will make it possible to successfully solve the problem of intensive utilization of the reproductive herd and, consequently, to raise the production and economic indicators of animal husbandry.

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UDC 63

WEAKNESSES, TASKS OF LIVESTOCK RAISING OUTLINED

Moscow ZHIVOTNOVODSTVO in Russian No 1, Jan 82 pp 2-4

/Article: "Towards New Heights"/

/Text/ Farm workers, similar to all Soviet people, have welcomed with a great show of enthusiasm the decisions handed down during the November (1981) Plenum of the CC CPSU and the Sixth Session of the USSR Supreme Soviet and also the speech delivered during the Plenum by the General Secretary of the CC CPSU Comrade L.I. Brezhnev and they are striving to make a worthy contribution towards carrying out the tasks advanced during the 26th CPSU Congress.

Many of the country's kolkhozes and sovkhozes, by skilfully employing the available reserves during 1981, a year marked by unfavorable weather conditions, achieved fine results in the production and sale of livestock products to the state. Compared to 1980, increases were recorded in the procurements of milk, livestock, poultry, eggs and wool by many farms in the Kazakh SSR, Uzbek SSR, Estonian SSR, Azerbaijan SSR, Kirghiz SSR, Tadzhik SSR, Georgian SSR, Stavropolskiy Kray and in Kemerovskaya, Tyumenskaya, Tomskaya, Irkutskaya, Chitinskaya, Zakarpatskaya, Krymskaya, Khersonskaya and some other oblasts in the RSFSR and the Ukraine.

A considerable increase in the productivity of cows was achieved in the Armenian SSR, Azerbaijan SSR and the Turkmen SSR.

Fine results in the development of livestock raising were achieved by workers on farms in Cherkasskaya Oblast -- the initiators of an all-union competition among agricultural workers for increasing the production and sale to the state of animal husbandry products during the Eleventh Five-Year Plan.

At the same time, not all of the kolkhozes and sovkhozes are as yet achieving high and stable indicators in the development of livestock raising. During the first year of the Eleventh Five-Year Plan, many farms in the RSFSR, the Ukraine, Moldavia, Belorussia and Latvia fell behind considerably in their obligations to sell meat and milk to the state.

At the present time, with the results of the agricultural year being summarized, considerable importance is being attached to analyzing the shortcomings and derelictions in a thorough and exacting manner. This will make it possible to eliminate the lag that has developed in a number of areas and it will permit measures to be undertaken aimed at increasing the productivity of the animals.

The country's animal husbandrymen have been assigned great tasks for the Eleventh Five-Year Plan. The average annual production of meat (in dressed weight) must be raised to 17-17.5 million tons, milk -- to 97-99 million tons, eggs -- to no less than 72 billion and wool -- to 470,000-480,000 tons.

In solving their assigned tasks, the kolkhozes and sovkhozes are taking advantage of a tremendous amount of production potential and the increasing skills of the farm workers.

This current year is considered to be an important stage for carrying out the plans as outlined. In addition to achieving the rates of growth called for in the plan for the second year of the five-year plan, a requirement will exist for compensating for the output shortfall experienced last year.

The plans for 1982 call for increases in the production and procurements of all types of animal husbandry products.

The increase in the production of animal husbandry products is to be achieved based upon intensification of the branches, increased productivity for the livestock and poultry, the organization of full-value feeding, the introduction of progressive livestock maintenance technologies, improvements in breeding work and upon strengthening and improved use of the branch's logistical base.

Planned intensification of the logistical base for agriculture is being carried out this year. By means of the budget, the internal resources of sovkhozes and bank credits, 57.3 billion rubles will be employed for the development of livestock raising. Expenditures for expanding production operations at kolkhozes will amount to 20.4 billion rubles. The overall volume of capital investments in agricultur during 1982 -- 37 billion rubles.

Increases are taking place in the deliveries to the rural areas of powerful modern equipment, mineral fertilizers and other logistical resources. In addition, a number of measures are being carried out aimed at strengthening the economies of kolkhozes and sovkhozes. All of these factors are serving to create a reliable base for realizing a considerable increase in the production of agricultural products.

The list of priority tasks includes increasing to a considerable degree the production of feed and raising the quality of the feed. This year the kolkhozes and sovkhozes must procure up to 77 million tons of hay, 264 million tons of silage and 54 million tons of forage and melon crops. In addition, they must produce considerably more high protein feed using alfalfa, clover and rape, they must expand their plantings of pulse crops (soybeans, peas and others) and they must improve their use of carbamide and other chemical additives.

For the majority of the country's regions, the principal reserves for increasing meat production are improvements in reproduction of the herd and protecting the cattle stock and shortening the raising and fattening periods for the animals.

Importance is being attached at the present time to taking into account the inadequate availability of feed for the fattening of stock in a number of areas, to composing special groups consisting of animals subject to sale for meat purposes during the 1st and 2d quarters and to undertaking measures aimed at organizing suitable feeding based mainly upon continuous operations by the feed preparation shops.

Solutions must be found for very complicated and important tasks in dairy cattle husbandry. For achieving the milk procurement volumes called for in the state plan for the economic and social development of the USSR during 1982, the productivity of the cows must be raised by an average of no less than 150 kilograms per head above the figure for last year at kolkhozes and sovkhozes throughout the country.

Special attention must be given to raising the milk yields at farms having low cow productivity.

At each such kolkhoz or sovkhoz, specific measures must be developed and implemented aimed at ensuring radical improvements in the feeding and maintenance of the livestock, organizing breeding work and reproduction of the herd, raising replacement animals and introducing progressive technologies and new and effective forms for organizing production and labor.

Increased milk production will be promoted by improvements in the use of the brood stock, by an increase in the number of first heifers being added to the principal herd and through the organization of improved preparation of heifers for calving and increasing the milk yields of newly calved cows.

An important reserve for increasing the state milk procurement volumes is that of raising the marketability of the milk. At the present time, more than 8 million tons of whole milk, or 12 percent of the overall production, are being fed to calves and young pigs. The experience of leading farms reveals that milk consumption for the raising of young stock can be reduced considerably through more efficient use of substitutes.

Farms are sustaining substantial losses owing to the low quality of the milk being sold to the state. Each year, in a conversion for basic fat content, these losses amount to approximately 1 million tons, or 2 percent of the procurement volume. Roughly from 45,000 to 60,000 tons of milk are being returned to the farms for not meeting the requirements set forth in the GOST /State Standard/. The use of these reserves alone would make it possible to increase the milk procurements by 600,000-700,000 tons annually.

Whether or not the indicators planned for 1982 for developing animal husbandry will be achieved, will be dependent to a great degree upon the organized carrying out of the livestock wintering program. Under present conditions, special importance is being attached to the rational and efficient use of feed resources, especially grain forage. A situation must be reached wherein all available feed preparation shops and feed kitchens have been placed in operation and each kilogram of feed is fed to the animals only in prepared form.

The work must be organized in a manner such that use is made of additional sources of feed resources: waste products of the food, starch-syrup, canning and meat and dairy industry; food scraps obtained from public catering enterprises and from the population; coniferous-ramal feed.

In the work being performed by the agricultural organs and kolkhoz and sovkhoz leaders and specialists, special attention must be given to those problems concerned with raising the labor productivity of animal husbandrymen and creating the production and domestic conditions required by them.

At the present time, a very important period is at hand for the kolkhozes and sovkhozes -- the mass breeding of the animals is in progress. Special attention must be given to protecting all of the new-born young stock and to preventing the premature culling out of brood stock.

Correct action has been taken at those kolkhozes and sovkhozes where all of the heifers suitable for breeding have been placed in individual groups and their mating organized in the interest of obtaining additional offspring. Deserving of attention is the work carried out by agricultural organs in the Belorussian SSR and in a number of oblasts in the RSFSR and the Ukraine, in connection with the additional selection and mating of sows and young pigs during January and April. This measure is making it possible to increase the number of young pigs being obtained during the spring and summer period, for raising and fattening in simple camp type structures based upon the use of cheap summer feed.

A great contribution towards increasing the production of meat can be made by the private plots of kolkhoz members and manual and office workers, where approximately 23 million head of large-horned cattle, 15 million swine and 30 million sheep and goats are being maintained. However, insufficient use is being made of the potential afforded by the private plots. More than one third of all families of kolkhoz members and manual and office workers residing in the rural areas do not have either cattle or poultry.

In order to increase meat production on the private plots, a considerable increase is required in the sale of young pigs and young poultry stock to the population for raising and fattening.

In the near future it will be necessary to restore those swine raising facilities which were unjustifiably eliminated at non-specialized farms or to create new ones for satisfying intra-farm needs and for ensuring that the population is supplied with young pigs.

The kolkhozes and sovkhozes must carry out more extensive work aimed at concluding agreements with the population for the maturing and fattening of livestock and they must provide the necessary assistance to kolkhoz members and manual and office workers in creating animal husbandry associations and improving their operations, in procuring feed and in providing zooveterinary services for the animals.

A promising trend in the industrialization of animal husbandry is that of modernization of existing farms. The recommendations for farm modernization, developed by scientific institutes and leading practice, are making it possible to introduce a flow line-departmental technology for milk production at conventional farms and also at newly built farms and complexes.

The introduction of a progressive technology involving the use of all-round mechanization of production processes and the rational organization of the labor of workers will ensure a reduction in labor expenditures per unit of cutput and raise the branch's profitability.

To fulfill the tasks assigned by the party and government with regard to the further development of animal husbandry -- to produce more meat, milk and other products -- these then are the vital concerns today of workers on the kolkhoz and sovkhoz farms, all animal husbandry workers -- an important front for work in the rural areas.

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7026

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LIVESTOCK

IMPORTANCE OF DAIRY CATTLE STRESSED

Kiev SIL'S'KI VISTI in Ukrainian 29 Nov 81 p 3

[Article: "Attention to Dairy Cattle"]

[Text] The board of the UkSSR Ministry of Agriculture has examined the state of affairs in the area of milk production and procurement on the farms of Aleksandriyskiy Rayon in Kirovogradskaya Oblast and in Yemil'chinskiy Rayon in Zhitomirskaya Oblast.

It was noted that organizational work in the area of boosting productivity of dairy cattle, milk production and procurement is unsatisfactory in these rayons. Rayon agricultural administration chiefs as well as the specialists and managers of many farms are not doing everything to ensure successful growth and development of dairy farming and to overcome backwardness in this area of agriculture.

The majority of farms in both rayons have done a poor job of organizing herd reproduction. There are no dairy cow physiological examination stations, and they are not keeping gynecological treatment logs. As a consequence the level of efficiency of utilization of female stock is low.

Through the fault of farm specialists, they are failing closely to monitor cows when withdrawn from milking prior to calving, and they have failed to organize feeding of cows in relation to their physiological condition, lactation period, and productivity.

In spite of the limited quantity of available feed, there has been failure to prepare feed properly, failure to apply correct rations, and failure to follow the proper daily schedule at livestock units. Organization of labor is poor.

The board of the UkSSR Ministry of Agriculture decided to remove I. S. Ben'ko as chief of the Aleksandriyskiy Rayon Agricultural Administration in Kirovogradskaya Oblast, for unsatisfactory organizational work in the area of growth and development of dairy farming, failure to utilize capabilities and reserve potential to increase dairy cow productivity, failure to achieve milk production and procurement targets, and failure to respond to numerous warnings.

O. S. Mel'nik, chief of the Yemil'chinskiy Rayon Agricultural Administration in Zhitomirskaya Oblast, was issued a reprimand.

In order to correct revealed shortcomings, the Ministry board has instructed agricultural administrations, farm managers and specialists radically to improve work in the area of efficient raising of replacement heifers and to boost dairy cow productivity on the basis of proper organization of milking operations and differentiated feeding in relation to productivity and physiological condition.

The board demanded an improvement in organizational work in the area of herd reproduction and more vigorous activities on the part of committees to combat barrenness among dairy cows.

To achieve efficient utilization of feed resources, it was proposed that a feed preparation operation be set up on each farm. Additional personnel should be assigned to all livestock units, and regular veterinary training should be offered. There should be more extensive use of moral and material incentives to increase livestock productivity. There should be stepped-up competition among stockmen for meeting plan targets in the area of growth and development of dairy farming in 1981 and beyond.

3024

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AGRO-ECONOMICS AND ORGANIZATION

PROGRESS, FAILINGS OF USSR INTER-FARM COOPERATION REVIEWED

Moscow EKONOMICHESKAYA GAZETA in Russian No 5, Jan 82 p 18

/Article by A. Zavgorodniy, deputy chief of the Main Administration of USSR Ministry of Agriculture

/Excerpt/ Increased Production, Lowered Expenditures

At the present time, inter-farm cooperation embraces many branches of the rural economy. Moreover, the most widespread forms of this cooperation are as follows: inter-farm enterprises engaged in carrying out various types of production work, kolkhozes and sovkhozes which perform the functions of inter-farm enterprises and also production associations in agriculture. With each passing year, a further increase is noted in the proportion of inter-farm formations engaged in producing agricultural products and rendering various types of services to the kolkhozes and sovkhozes.

In 1980, 1.6 million tons of meat were produced on an inter-farm basis, or 11 percent of the volume of meat produced in the country's public sector, and also 10 million tons of mixed feed and feed mixtures (approximately 15 percent of their overall production). The construction organizations performed almost 5 billion rubles worth of work, or 40 percent of the overall volume of such work carried out on farms throughout the country. Inter-farm organizations furnished 1.4 billion rubles worth of services to kolkhozes and soykhozes.

Many high pedigree cattle were raised and sold to farms based upon cooperation. The enterprises concerned (excluding construction organizations) received 458 million rubles of profit, of which amount 326 million rubles were transferred to the farms and used for expanding the production base.

Agricultural production is developing on an inter-farm basis in like manner in all zones of the country. In particular, it has undergone extensive development in many oblasts in the Russian Federation, the Ukraine, Belorussia, Moldavia, Uzbekistan, Lithuania and Kirgizia. The operational results of a majority of the inter-farm formations reveal that in those areas where proper attention is given to them, the merging of the efforts of several farms makes it possible to organize the highly effective production of goods.

The Promyshlennyy Sovkhoz in Biyskiy Rayon in Altayskiy Kray can be cited as an example. It is performing the functions of an inter-farm enterprise in the

fattening of large-horned cattle. Forty nine reproduction farms in the Gorno-Altayskaya AO and five specialized farms for the maturing of young large-horned cattle stock in Sovetskiy Rayon in this same kray have joined in cooperation with it. An industrial technology for the fattening of animals has been mastered here. Their average daily weight increase is 800-900 grams. The cattle are sold at an average weight of more than 400 kilograms, with 96 percent of the animals being in a high state of nourishment. The production cost for a quintal of weight increase does not exceed 115-120 rubles and the production profitability for beef is 60-68 percent. This form of cooperation in the production of beef has exerted a positive effect on the development of this branch on farms throughout the oblast. It is sufficient to state that meat sales to the state increased by 34 percent during the Tenth Five-Year Plan.

Another example -- drawn from the operational experience of farms in Gomel'skiy Rayon, Gomel'skaya Oblast in the Belorussian SSR. Beef production is carried out here based upon inter-farm cooperation at the Kolkhoz imeni Uritskiy. The intensive production of feed was organized on the land of this farm, while the cultivation of other crops was undertaken by the partners in cooperation. During the cattle fattening period, carried out on a cooperative bases, beef production in the rayon increased by one and a half times and labor expenditures per quintal of output decreased by 30 percent. Production profitability is 31 percent, or twice as high as the average for the oblast.

The work being carried out at the Zavety Il'icha Kolkhoz in Domodedovskiy Rayon in Moscow Oblast is having a positive effect on growth in milk production and on raising the productivity of the milking herd. This facility specializes in the raising of heifers on a cooperative basis for other farms, with use being made mainly of internally produced feed. Since the commencement of its operations (since 1974), more than 20,000 elite-record and record heifers have been raised here and delivered to farms in the same rayon. During the past 3 years alone, the gross production of milk on farms in the rayon increased by more than 30 percent and milk sales to the state -- by 35 percent. Labor expenditures per quintal of milk fell by almost twofold.

Structure of Inter-Farm Enterprises and Organizations



Key:

- 1. For the production of agricultural products
- 2. For providing services for agricultural production
- 3. Other non-agricultural enterprises and organizations
- 4. Construction enterprises and organizations

High operational indicators were achieved by many inter-farm enterprises engaged in feed production. The Poyma Inter-Farm Enterprise has been operating for 6 years in Suvorovskiy Rayon in Tul'skaya Oblast. Eleven kolkhozes in the rayon participated in its creation. Use is made here of more than 7,000 hectares of floodplain land, with more than 70 percent of the feed being procured from this land. During the period in which this inter-farm enterprise has been in operation, feed production in the rayon has increased by 23 percent and this has had a positive effect on growth in the production of animal husbandry products. Many examples of effective work by inter-farm enterprises in other branches of production could also be cited.

Not Without Problems

At the same time, an analysis of the status of affairs has shown that serious mistakes and miscalculations have been tolerated in a number of rayons during the carrying out of specialization and concentration of agricultural production based upon inter-farm cooperation. This has delayed development of the branches of agriculture and also improvements in the kolkhoz and sovkhoz economies. In many instances, specialized farms and various inter-farm formations were created in the absence of the required technical-economic validation, in haste, and without a comprehensive examination of mutually related problems, upon which their effective operation is dependent. Here we have in mind the shortcomings associated with reproduction of the herd, supplying the cattle with internally produced feed, introducing a progressive technology and scientific organization of labor and the absence of skilled personnel. Thus, by way of illustration, was created the Prudovskoye Inter-Farm Enterprise in Orlovskaya Oblast for the maturing and fattening of young large-horned cattle stock. Each year it failed to satisfy its own feed requirements and during some years less than one half of its production capabilities were utilized. As a result, the plans for weight increases in the cattle were not fulfilled. In recent years the enterprise has operated at a loss. Here the average daily weight increase in the cattle did not exceed 370 grams and labor expenditures per quintal of weight increase amounted to 103 man-hours. From 12 to 24 quintals of feed units were expended per quintal of weight increase. The production cost per quintal of weight increase ranged from 335 to 680 rubles. What type of profitability can we discuss?

Owing to a large number of derelictions, many inter-farm enterprises are not exerting a decisive influence with regard to strengthening the economies of those farms participating in cooperation. In 1980 there were more than 700 inter-farm enterprises operating at a loss throughout the country and the total amount of their losses came to 107 million rubles. There were many such enterprises in the Turkmen, Tajik, Georgian, Azerbaijan and Armenian SSR's. Many unprofitable enterprises are to be found in Rostovskaya, Tambovskaya, Voronezhskaya, Volgogradskaya and other oblasts of the RSFSR and also in some oblasts in the Ukraine and Belorussia.

In recent years, owing to a shortage of operator personnel and other factors, the facilities used for the maturing and fattening of large-horned cattle have often stood empty at many inter-farm enterprises and this has led to a reduction in the output of goods.

However, the most serious area of neglect in the work of inter-farm enterprises for the production of animal husbandry products is the shortage of feed. Many kolkhozes and sovkhozes -- participants in cooperation -- are unable to fulfill

their annual tasks for forage deliveries. Thus, in 1980, the farms participating in cooperation fell short in their feed deliveries to inter-farm enterprises in the RSFSR by more than 30 percent, in the Ukraine -- 19, in Kirgizia -- by more than 27 percent.

In many instances, full use is not being made of the land tracts available for feed production. Just as in the past, plans for the sale of many types of agricultural products are being assigned to the fattening farms of cattle industries in the RSFSR and the Kazakh and Kirgiz SSR's, which carry out the fattening of cattle based mainly upon the principles of inter-farm cooperation. This is hindering the creation of the feed base required for the fattening of cattle.

Number of Inter-Farm Enterprises and Organizations By Union Republics

USSR	9638	Lithuanian SSR	118
RSFSR	4034	Moldavian SSR	228
Ukrainian SSR	3510	Latvian SSR	49
Belorussian SSR	376	Kirgiz SSR	99
Uzbek SSR	313	Tajik SSR	82
Kazakh SSR	190	Armentan SSR	67
Georgian SSR	316	Turkmen SSR	65
Azerbaijan SSR	158	Estonian SSR	33

Very little use is being made in some oblasts of the advantages afforded by specialized feed production and work directed towards organizing specialized feed production enterprises on floodplain lands is being carried out at a slow tempo. In some instances, the inter-farm enterprises for feed production created on floodplain lands are being developed slowly, they have a weak logistical base and they are not coping with the production program.

The Mistakes Must Be Corrected

In a number of areas, proper attention is not being given to improving the production-economic interrelationships of those farms participating in cooperation with inter-farm enterprises. Quite often an equivalent exchange of operational results is not observed and disruptions take place in the established procedures for assigning the procurement plans for agricultural products and distributing the profit and products obtained.

The accounting prices for young large-horned cattle stock in a number of oblasts, established and approved by the RSFSR Ministry of Agriculture, require revision since they were not determined for all of the cattle weight groups being delivered for maturing and fattening. This imposes unequal economic conditions upon the farms. Such incidents took place in Kuybyshevskaya, Gor'kovskaya, Vologodskaya and other oblasts in the RSFSR, in Ural'skaya Oblast in Kazakhstan, in Sumskaya Oblast in the Ukraine and in some Belorussian oblasts. All of this is bringing about a deterioration in the economic indicators of the inter-farm formations.

In a number of cases, the kolkhoz and sovkhoz economies are being adversely affected by the work of various inter-farm enterprises and organizations that have been created in different areas for providing production services in behalf of agriculture. Some of them are overstating their rates for services and this is raising the production costs at the kolkhozes and sovkhozes.

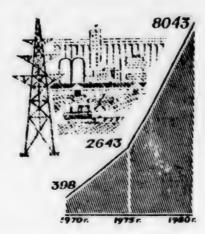
Here is an example. The Kalininskaya Oblast Sel'khozenergo Association earned 923,400 rubles of profit from its work and yet only 8.2 percent of this amount was transferred over to the participating farms. At the same time, many of the oblast's kolkhozes and sovkhozes operated at a loss. Excessively high profitability levels were recorded at the Sel'khozenergo associations in Bryanskaya, Smolenskaya, Tambovskaya, Kurskaya and some other oblasts in the RSFSR.

During the past few years, in the absence of a special need for them, various inter-farm organizations were created here and there for providing services for agriculture in the non-productive sphere: dispatcher, control-auditing and some other groups, all of which will lead to a diversion of kolkhoz and sovkhoz resources. The creation of such formations was especially extensive in a number of oblasts in the RSFSR, in the Ukraine and in some other republics.

The Board of the USSR Ministry of Agriculture examined these problems, assisted by representatives from the ministries of agriculture of a number of union republics and from some oblast agricultural administrations. However, as revealed during inspections, only weak measures are being taken to reduce the cost of the administrative apparatus or to eliminate various unnecessary organizations engaged in providing services for the kolkhozes and sovkhozes.

The serious shortcomings which exist in the process of developing inter-farm cooperation are in many instances associated with violations of the democratic principles in the administration of the inter-farm formations, with a reduction in the role played by the councils of the inter-farm enterprises and with their being replaced by various types of administrative control organs. This leads to unjustified growth in the size of the administrative apparatus and to a reduction in the responsibility of kolkhozes and sovkhozes for the operational results of the inter-farm formations created by them.

Growth in the Fixed Capital of Inter-Farm Enterprises (With the Exception of Construction Organizations) (millions of rubles)



Quite often the meetings of authorized farm representatives -- participants in cooperation -- and the council meetings of inter-farm enterprises are conducted in an irregular manner, without a sufficient quorum. Quite often the problems raised for discussion by these organs of control do not touch upon the principal problems

of output production or economic interrelationships, upon which efficient operations and improvements in the kolkhoz and sovkhoz economies are dependent.

There have also been incents of the farms -- participants in cooperation -- being unable to administe, the affairs of inter-farm enterprises created by them. Thus the Seym Inter-farm Enterprise for Feed Production in Sumskaya Oblast transferred one fourth of the grass meal produced to other consumers without the consent of the participating farms.

The USSR Ministry of Agriculture, jointly with interested ministries, departments and VNIESKh /All-Union Scientific Research Institute of Agricultural Economics/ prepared and sent to the various areas approximately 40 normative documents that regulate the economic, legal and other questions associated with the activities of inter-farm formations. However, in some oblasts these documents were not made available to the farms in a timely manner. The leaders and specialists at the inter-farm enterprises failed to organize a study of them.

The elimination of all of the above-mentioned shortcomings in inter-farm cooperation will promote an increase in the role played by it in improving agricultural production and strengthening the kolkhoz and sovkhoz economies.

7026

CSO: 1824/161

DEVELOPING INDUSTRIAL SUBSIDIARY ENTERPRISES

Importance To RSFSR Economy

Moscow ZHILISHCHNOYE I KOMMUNAL'NOYE KHOZYAYSTVO in Russian No 10, Oct 81 p 11

/Article by A.A. Malyuchenko, department head in Planning-Economic Administration of the Ministry of Housing and Municipal Economy for the RSFSR: "A Fine Aid -- A Subsidiary Farm"/

/Text/ Subsidiary farms. Their creation and active development at enterprises and institutes without a doubt constitute a fine aid for improving the organization of public catering. Certainly, such a measure represents a true means for solving the task assigned by the 26th CPSU Congress: to utilize fully the opportunities available within the country for improving the supply of meat, milk and vegetables for the population.

And in those areas where this fact is understood and where interest and initiative are displayed in creating subsidiary farms, the desired results are immediately forthcoming.

Our branch offers many examples of skilful management and the intelligent use of additional measures for increasing the production of agricultural products by means of subsidiary farms.

The largest enterprise in the RSFSR MZhKKh /Ministry of Housing and Municipal Economy/ system is the republic Tsvety Association, the structure of which includes 16 facilities. Today eleven of them have subsidiary farms, the overall area of which is 16,000 hectares. Of this amount, 12,500 hectares constitute agricultural land, the area under crops is 2,800 hectares and there are 40 hectares of fruit and berry plantings.

There are 1,450 head of large-horned cattle, 8,200 rabbits and 1,000 chickens being maintained here. Last year, the fields and farms here produced 13 tons of potatoes, 233 tons of vegetables, more than 130 tons of meat in live weight, 1,168 tons of milk and 3,902 tons of feed, including 1,220 tons of grain, 120 tons of hay, 4,610 tons of straw, 115 tons of feed roots, 7,016 tons of silage, 537 tons of grass meal and 1,650 tons of green feed.

The surplus products sold to the state by these subsidiary farms amounted to 16 tons of grain, 942 tons of milk and 75 tons of meat (in live weight).

Fine subsidiary farms have been created at subordinate enterprises and organizations in the Tuvinskaya, Dagestanskaya, Kabardino-Balkarskaya and Bashkirskaya Autonomous Republics, in Primorskiy, Khabarovskiy and Krasnoyarskiy Krays and in Arkhangel'skaya, Astrakhanskaya, Kamchatskaya, Kemerovskaya, Kostromskaya, Rostovskaya, Orenburgskaya, Sakhalinskaya and Tomskaya Oblasts. Today the overall land area of these 64 farms amounts to 5,300 hectares, including agricultural lands of approximately 4,500 hectares. They also specialize in the breeding of large-horned cattle, swine and rabbits. The results achieved there last year are impressive. Production was as follows: 1,663 tons of potatoes, 8,512 tons of vegetables, 29.4 tons of fruit and berries, 345 tons of meat, 366 tons of milk, 270,000 eggs and 104 tons of feed.

The leaders and professional trade union activists of housing and municipal organs in Primorskiy and Krasnoyarskiy Krays are devoting a great amount of attention to the development of the subsidiary economy.

At enterprises and organizations of the housing and municipal economy of the Primorskiy Kray Executive Committee, there are nine non-commodity swine farms where 1,465 animals are being maintained. Their number will be increased considerably by the end of this current five-year plan. The plans for this same period call for the area under crops at these farms to be expanded by a factor of 1.5.

The Garevskiy lespromkhoz /lumber industry farm/ of the Krasnoyarskkrayremstroy Association has a subsidiary farm and two fattening stations for 17 head of large-horned cattle and 120 swine. The value of the fixed productive capital of an agricultural nature here is 50,000 rubles and the size of the land area is 30 hectares. In all, 12 individuals are carrying out the production operations.

Strong and well organized collectives have developed at two subsidiary farms of the MZhKKh for the Dagestanskaya ASSR. Subsidiary farms of enterprises and organizations subordinate to the Ministry of Housing and Municipal Economy for the Bashkirskaya ASSR are engaged in the breeding of bees and this enabled them to harvest 3 tons of honey this year. The plans call for the yield of this product to be increased to 10 tons by the end of the five-year period.

The decision has been handed down to organize subsidiary farms during the next few years in Magadanskaya, Orenburgskaya, Ryazanskaya, Tyumenskaya, Yaroslavskaya, Sverdlovskaya and Penzenskaya Oblasts.

Life has shown that the creation of subsidiary farms is a necessary and important endeavor. Those housing and municipal organs which were able to organize such farms in a correct and fine manner became convinced of this fact based upon their own experience. The meals made available to their collectives became more rich and diverse. The dinners became cheaper. Yes and the profit obtained from the sale of surplus products also played a positive role.

However, it is not superfluous to mention that assistance is required here from without. Agricultural equipment, machines, feed, chemicals and other materials must be allocated to the subsidiary farms in like manner as they are being provided to the kolkhozes and sovkhozes.

The land areas and work forces must be made available more rapidly and in a more efficient manner. In short, all of the conditions required for ensuring that the subsidiary farms are properly developed during the Eleventh Five-Year Plan must be created.

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Developmental Difficulties in Belorussia

Moscow IZVESTIYA in Russian 8 Jan 82 p 2

/Article by M. Shimanskiy, Minsk-Mogilev: "Agricultural Department of a Plant"/

Text/ An increasing number of subsidiary farms of industrial enterprises are being created in Belorussia. Some worker collectives have already accumulated experience in this regard and a majority of the plants, factories and associations are taking their first steps. A search is underway for the best variants for solving the problem. Thus, in Mogilevskaya Oblast, the entire Shinnik Sovkhoz is being transferred over to the Bobruyskshina Association, the largest production association in the republic.

Seven months have elapsed since the farm, with all of its agricultural land, production, housing and public buildings, livestock, equipment and staff of workers and specialists, was turned over to the Bobruyskshina Association. What plans do the Shinnik workers have for this large farm. It has been decided that the sovkhoz will specialize in the production of meat and milk. Taking into account the situation in which the farm presently finds itself, the chief points for the application of effort and the concentration of resources have been outlined. First of all, attention was focused on the accelerated development of the logistical base, improvements in the structure of the plantings, the development of public animal husbandry and on improving the working conditions and daily routine of the people.

The general director of the Bobruyskshina Production Association, A. Khimanych, described the situation correctly: "Only such a large enterprise as ours is capable of creating an improved base for the production of food products for its workers. Based upon the use of the entire farm."

The Shinnik Sovkhoz consists of 2,101 hectares of agricultural land, of which amount there are 1,330 hectares of arable land. There are also 26 hectares of sovkhoz forest. The territory of the farm includes a portion of the Chigirin Reservoir. But first let us discuss the arable, having and pasture land.

Last year a low harvest was obtained here. The grain crop yield was 14.6 quintals per hectare and potatoes -- 121 quintals. It is generally admitted that the farm's land is not rich. The arable land is evaluated at barely 28 points and the average for Kirovskiy Rayon -- 40 points. The fields are small and special difficulty is encountered in turning the equipment around

"Up until last year, 100 hectares of our land were not in use" related the chief engineer of the sovkhoz A. Tsybul'skiy, "Bur what could be done there when with each step one encountered a tree, bush or a rock. In the spring we carried out soil improvement work on the entire area. We reseeded 20 hectares of haying and pasture land. We plan to carry out radical improvements on 200 more hectares of natural land.

The area under crops is being improved. At the present time, taking into account the new tasks confronting the sovkhoz, a great amount of emphasis is being given to food crops in carrying out the farming program. Let us take one of the chief agricultural crops -- potatoes. It bears mentioning that potatoes are a strong aid

for use in the development of animal husbandry. Although only 135 hectares were allocated for this crop earlier, at the present time the potato fields have been increased to 160 hectares.

"Potatoes are required for dining hall associations and for the workers" stated A. Tsybul'skiy, "We will also grow more vegetables. The construction of a potato storehouse is planned. A large area will be occupied by corn and root crops."

A most important branch of the Shinnik Sovkhoz -- animal husbandry. And maximum development of this branch is of general concern. What methods are available here for solving the problem? The chief one -- increasing the number of animals and improving the quality of the sovkhoz herd, modernization, mechanization of the farms, introduction of progressive technologies.

Earlier the milk yields at the farm were very low. In 1980, for example, an average of 1,656 kilograms of milk was obtained from each cow. The plans for 1982 call for an average of 2,500-2,700 kilograms of milk to be obtained from each cow. And specific measures are being undertaken aimed at achieving this goal.

"We have already procured 309 pedigree heifers" stated the director of the farm, F. Vashchilo, "The sovkhoz presently has 1,122 head of large-horned cattle. In 1982, the milking herd will be increased by 300 head.

Importance is attached to ensuring good wintering conditions for the cattle. During the summer we procured adequate amounts of silage and haylage. The association sent as many people as were required to assist in carrying out this work.

The construction of a new swine raising complex has commenced. With its introduction into operations, the sovkhoz will double its meat production.

It is obvious that the collective of the farm and the association does not live by production alone. The settlement of the farm is improving in appearance with the passage of time. More than 5 kilometers of asphalt road have been built. The association has a strong capital construction administration. And if the sovkhoz submits a request to have a certain type of work performed -- a repair brigade appears on the scene immediately.

Such are the initial steps taken by the Bobruyskshina Subsidiary Farm. Obviously, as yet it is too early to discuss specific results and yet mention can be made of the problems confronting the association and its sovkhoz. This is particularly true in view of the fact that the creation of subsidiary farms serves to confront the collectives of enterprises and party, soviet and economic organs with many problems of a different type. And they must be solved at a high level.

The sovkhoz director is quite distrubed, for example, over exactly where he is to obtain a good plan for a swine farm, the construction of which has been planned. The leaders of the association shrug their shoulders: it is said that they are not familiar with this work. But this does not make it any easier for the director. Certainly, it should be borne in mind that the solving of many problems associated with the creation and development of subsidiary farms is complicated by a natural lack of knowledge, on the part of the leaders of industrial enterprises, of the principles of animal husbandry and field crop husbandry. Once again, it is

difficult for these agricultural departments to succeed in the absence of specific assistance being furnished by the agricultural administrations and planning organizations.

But the Shinnik Sovkhoz, after having become the association's agricultural department, in point of fact is not now receiving assistance from the rayon agricultural administration.

"You no longer belong to us and you are not "working" in behalf of the state plan assigned to the rayon, we are told" stated the sovkhoz director, "And no assistance is provided. Yet we are in need of a Vikhr' combine for harvesting corn and we also need cultivators and grain cleaning equipment. A land reclamation project of the sovkhoz, an area of 202 hectares in the floodplain for the Drut' River, has been removed from the title lists for 1982. And this is our principal trace for cultivated pastures."

What should be the relationships between the subsidiary farms and the state organs and also the enterprise in behalf of which the agricultural department carries out its operations? Nobody knows. Up until now, there has been no legal statute that could define the status of a subsidiary farm. No economic or legal definition has as yet been provided for a subsidiary farm of an enterprise, organization or institute.

At the present time, it often happens that many union and union republic ministries and departments are not allocating (or if they are allocating, then only in extremely small amounts) capital investments to their enterprises for the creation of a logistical base for the subsidiary farms, for erecting housing for them or for solving social problems.

Thus it is only reasonable to assume that the workers in these agricultural departments will ask the question: Who are we and to whom do we belong? The ministries and departments must not adopt a wait-and-see attitude. Their immediate responsibility is to provide maximum support for their collectives as they strive to master the new work.

The fact that an entire sovkhoz was transferred over to the Bobruyskshina Association is viewed as an exception in Belorussia. The potential of the association and the nature of its production were taken into account. For developing their own agricultural departments, enterprises are allocated tracts of land from the state land and forestry funds. By way of an exception, lands which are not being employed in an efficient manner by economically weak kolkhozes and sovkhozes are also made available for this purpose. Unfortunately, these problems are being resolved all too slowly. The local soviets are obligated to participate actively in solving these problems and to exercise constant control over implementation of the measures planned.

A very serious problem is the personnel situation on the subsidiary farms. Trained workers and specialists are required if the work is to be carried out at a high level. But where can they be obtained from? They must not once again be drawn from the rural areas, where there is already a shortage of them. At this same Shinnik Sovkhoz, there is not one bookkeeper with a higher education. An accredited agronomist did work here, but he was transferred to the rayon agricultural administration when the farm was turned over to the association.

And this occurred at the Shinnik Sovkhoz -- a large farm. And what would be the situation at a small animal husbandry farm of an enterprise? How would the specialist problem be solved here? Indeed, the farm would require zootechnicians just as hothouses require agronomists and so forth.

An increasing number of Belorussian enterprises, organizations and institutes are creating their own subsidiary farms. Approximately 300 such farms have been organized during the past 2 years. Prior to the beginning of 1982, 24,000 head of large-horned cattle, 64,500 swine, 2,200 sheep, 18,700 head of poultry and approximately 19,000 rabbits were being maintained on such farms.

It is understandable that many problems develop initially during any new endeavor. The creation of subsidiary farms at enterprises is a matter of state importance. And the solving of problems that arise here is considered to be a priority task of the party, soviet, planning and economic organs.

Strengthening Azerbaijan Enterprises

Baku BAKINSKIY RABOCHIY in Russian 7 Jan 82 p 2

/Article: "New Strength for Subsidiary Farms"/

Text/ On 10 July of last year, the article "Auxiliary But Not Secondary" appeared in the newspaper BAKINSKIY RABOCHIY. In it, the author discussed the shortcomings in the organization and activities of a portion of the subsidiary farms and the problems remaining to be solved. Herewith we are publishing a number of replies received following publication of the article.

* * *

The questions raised in the article "Auxiliary But Not Secondary" are both vital and timely.

At the present time, the institutes of TsITEPsel'stroy (the former Azgiprosel'stroy) and Bakgiprogor are carrying out a definite amount of work aimed at furnishing technical assistance to Baku enterprises for the construction of subsidiary agricultural enterprises. Towards this end, the Baku Soviet made a number of land tracts available at Apsheron. At one of them, the Govsaninskiy land area, a plan was developed in response to an order from the Baku Soviet for the development and disposition of subsidiary agricultural enterprises for 35 organizations. The construction will be carried out using standard plans.

Beyond any doubt, the disposition of subsidiary farms on one land area must promote the accelerated construction and placing in operation of projects and also the rapid development of agricultural output. However, it is unfortunate that as yet a solution has not been found for the problem of who will be the general contractor for developing the planning-estimates documentation for the external engineering lines of communications. And this is delaying the course of the work and the development of the subsidiary farms on the Govsaninskiy land area. It is our opinion that the task must be solved by specialized planning organizations of the proper profile.

At the present time, TsITEPsel'stroy is also preparing plans for the development and disposition of subsidiary agricultural enterprises on the Gyuzdekskiy land area. The plan is being prepared in several variants. One of them calls for the construction of large animal husbandry, poultry raising and hothouse-hotbed farms, which will operate on a share basis for a number of enterprises. The principle of cooperation here can be both intra-departmental and inter-departmental. In the process, a considerable reduction will take place in the production costs -- by means of a reduction in capital expenditures, cooperation among auxiliary installations and a decrease in the number of service personnel.

At the same time, the institutes of TsITEPsel'stroy and Bakgiprogor are preparing and will soon complete a general plan for the development and disposition of subsidiary agricultural enterprises up to the year 1985 and into the foreseeable future. It will include all of the subsidiary farms of enterprises located at Apsheron.

An institute of TsITEPsel'stroy is also preparing plans for subsidiary agricultural farms at Ramana -- for the Baku plant for domestic air conditioners and Hospital No. 3 imeni Dzhaparidze and in Askeranskiy Rayon -- for the Stepanakert Production Motor Transport Association. It bears mentioning that the arrangements for solving the engineering networks were presented to the institute by the clients 4-6 months after the order was received and this served to delay the planning schedules on the whole.

The clients must obtain the limits from their ministries and departments without delay -- for including work in the institute's plan, all of the initial data required for planning must also be presented.

S. Guseynov,
Director of a TsITEPsel'stroy Institute

* * *

We wish to report essentially on the questions raised in the article "Auxiliary But Not Secondary":

Within the Soyuzneftemash Association, subsidiary farms are being organized the plants imeni Petrov, imeni Leytenant Shmidt, imeni Volodarskiy, imeni Yu. Kasimov, imeni S.M. Kirov and Bakinskiy Rabochiy.

The enterprises have carried out a definite amount of preparatory work. The Plant imeni Petrov has completed the preparatory stage, obtained funds for construction materials and it is now recruiting manpower. The plants Bakinskiy Rabochiy and imeni Leytenant Shmidt have already presented Gosbank with the planning-estimates documentation required for the opening of financing. Only the Plant imeni S.M. Kirov fell behind in planning its subsidiary farm and at the present time it is undertaking measures aimed at completing the plannint work by the end of the year.

On the whole, the plans call for the association's enterprises to obtain their initial animal husbandry products during the first 6 months of 1982. In general, the construction of the farms will be completed during the second half of 1982.

The Soyuzneftemash Association believes that our rates for preparing and creating subsidiary farms are insufficient and here there is a clear absence of the

experience required in this area, both in the plants and the republic's financialeconomic organs. In this regard and also taking into account future agrotechnical problems, we support the proposal advanced in the newspaper concerning the creation of a methodological center in the republic for subsidiary farms.

At the same time, the Soyuzneftemash VPO is convinced regarding the advisability of creating a special center within its apparatus for coordinating and planning the work of subsidiary farms.

R. Magerram-Zade, Deputy chief of the Soyuzneftemash Association

* * *

Azglavenergo has discussed the article "Auxiliary But Not Secondary" and believes that the problems touched upon in the article are vital and of considerable practical value in the development of subsidiary farms.

The task for developing subsidiary farms during the 1981-1985 period has been approved in an order handed down by the Main Administration. Poultry farms must be organized for the Khachmas and Stepananakert electrical power networks -- for 2,000-5,000 head of poultry and in 1982 and 1983 respectively. A vegetable farm will be placed in operation at the Azerbaijan GRES /state regional electric power plant/ and a sheep farm at the Sumgait Electric Power Network in Yashma.

The planning for the sheep farm for the Sumgait Electric Power Network and for the poultry farm for the Khachmas Electric Power Network was carried out and completed by Azglavenergo.

We are in agreement with the questions raised in the article concerning the creation of an organizational-consultative center on agricultural and animal husbandry problems for the subsidiary farms of industrial enterprises. We believe that the process of allocating land tracts for subsidiary farms should be simplified, especially those to be used for the growing of forage crops.

The proposal to furnish assistance to the enterprises in the form of feed, during the initial period of formation of the subsidiary farms, is completely correct.

M. Imanov, Chief of Azglavenergo

* * *

The Administration of the Azerbaijan Railroad, having discussed the article "Auxiliary But Not Secondary," reports as follows:

Following repeated appeals by the road's administration, a decision was handed down by the Baku Municipal Executive Committee allocating a tract of land for a subsidiary farm in Narimanovskiy Rayon. This tract was assigned to the Baladzhary Locomotive Depot. The passport was obtained for the plot allotted. The Ministry of Railways allocated the funds for planning the subsidiary farm and the Baku branch of Kavzheldorproyekt is preparing the planning-estimates documentation. The plans call for the construction of a poultry house for 4,500 head and a swine

fattening station for 300 head within the subsidiary farm complex. The decision has been made to build a hotbed farm in the future.

In accordance with a petition by the main party committee of Kirovabad Station and the management of the Kirovabad branch and also based upon a decision handed down by the Kirovabad Municipal Executive Committee, appropriate tracts of land were made available. They are being used for grape plantations.

The Kirovabad Locomotive Depot and the ORS /Department of Workers' Supply/ of the Kirovabad branch organized the tending of the vineyards and in the near future a harvest will be obtained for selling to the railroad workers. The plans call for planning work to commence in connection with the sowing of forage crops and the raising of vegetables and melon crops during 1982.

At the same time, preparations are underway for composing the planning-estimates documentation for the construction of poultry houses for 10,000 head at each farm, with one incubator for both farms. The ministry has been confronted with the problem of allocating funds for the planning.

The plans call for the creation of the following subsidiary farms: a poultry house for 4,500 head on the territory of the team-assembly base of road machine station No. 144 at Charkhi Station; a garden for the refrigerator car depot at Alyatypristan' Station -- for the raising of melon crops and vegetables on adjoining available territory; a poultry house for 5,000-10,000 head for the Kirovabad maintenance section of the Alabashly-Kyrykhly stage.

In view of the fact that insufficient work has been carried out, the administration of the road is undertaking measures aimed at expanding the existing subsidiary farms and creating new ones at our enterprises.

7026

STRENGTHENING MATERIAL, ADMINISTRATIVE SUPPORT FOR PRIVATE PLOTS

Moscow IZVESTIYA in Russian 23 Jan 82 p 3

/Article by Ye. Spiridonov: "Orchard and Garden"/

Text/ "Collective garden plots in the suburban zones of cities" writes Moscow engineer M. Myagkov in IZVESTIYA, "have actually been transformed into an additional agrarian department for the country. Such plots already occupy thousands of hectares of land. However, the impression has been created that amateur horticulture and gardening are not very exciting. Here the status of affairs is entirely dependent upon the initiative displayed by the owner of a plot. By means of incredible methods (quite often through smart dealers and profiteers), he is forced to obtain construction materials, fertilizer, light mechanization equipment and planting stock."

Unfortunately, the executive committees of local soviets, enterprises and their professional trade union organizations and the economic organs quite often withdraw from finding a solution for this problem that touches upon the interests of a great number of people. Approximately 15 million manual and office workers and the members of their families spend their leisure time in collective gardens. And this is not just for recreation purposes. More than 500,000 tons of fruit and berries and 2 million tons of potatoes and vegetables are being obtained annually from the collective orchards and gardens.

Thus a collective orchard involves first of all the use of the personal labor of citizens in behalf of society. Possessing tracts of land, they provide agricultural products for their families and they sell their surplus products at a market or through the state and cooperative trade. But the importance of this work does not stop here. Work out on the land serves to instill a love for work in the children. A cottage on an orchard tract, obtained from an enterprise or organization, strengthens the personnel retention problem and to a certain extent it eases the housing problem.

Such is the understanding of collective horticulture, for example, in Chelyabinskaya Oblast. Each year, the collective gardens here produce 22,000 tons of fruit and berries, 25,000 tons of potatoes and 15,000 tons of poultry and rabbit meat.

Horticulture in Novosibirsk is producing roughly the same quantities of these products for the dining tables. The horticultural associations in Yaroslavskaya, Rostovskaya, Saratovskaya and Voronezhskaya Oblasts are playing a noticeable role in improving the food balance. And in Estonia, for example, the owners of private plots are furnishing 85 percent of the republic's procurements of fruit and berries.

Those citizens who are supplying their families with agricultural products and selling their surplus products through various forms of trade are performing socially useful work. It is by no means an accident that individual labor performed in the domestic industry, in agriculture or in consumer services for the population has been reinforced in an appropriate article in the Constitution of the USSR. The decree of the CC CPSU and the USSR Council of Ministers entitled "Additional Measures for Increasing the Production of Agricultural Products on the Private Plots of Citizens" is oriented towards providing maximum assistance for development of the private plots of kolkhoz members and the orchard-garden tracts of citizens. In 1951 the horticultural associations had 40,000 manual and office workers operating 3,400 hectares of land and at the present time there are more than 4 million owners of garden tracts. They have available for their use 220,000 hectares of land. It is noted that 70 percent of the territory since transformed into flowering tracts was once either ravines, water-logged tracts or other types of unsuitable land.

Naturally, in order to improve uncultivated lands, obtain vegetable and fruit yields and raise poultry, something more is required than just the labor of a diligent proprietor and the members of his family. In addition, considerable monetary expenditures are required. In view of this fact, during the 1978-1981 period the horticulturists were provided with 60 million rubles worth of credit by the state and 4 million rubles were allocated to them by enterprises and institutes from the fund for socio-cultural measures and housing construction. This financial support for the private economy had an immediate and beneficial effect on its development. However, as yet the conditions required for strengthening the private plots of citizens had by no means been created in all areas. The scornful attitude towards the "private sector" had not been eliminated in all areas. Just as in the past, some leaders in the various areas still fail to take into account the potential of the private economy. And quite often this creates artificial complications when tracts are made available for use as collective gardens.

"We have 504 members in 16 horticultural associations" wrote Ye. Fedorova, in a letter addressed to IZVESTIYA from Novgorod, "Based upon our own bitter experience, we are convinced that the local authorities have not devoted proper attention to the party and governmental decrees on developing the private plots. At one time, horticultural associations were created in the suburbs beyond the railroad station for workers of the Volna Plant, a furniture combine, a branch of the railroad and other enterprises and organizations. In connection with the planned building up of this region, the tracts were taken away from us and they have now been lying fallow for several years."

A cool attitude towards horticulture makes itself known. A reduction took place in the production of agricultural products on private plots in this same Novgorodskaya Oblast and the population was deprived of an important addition to their dining tables.

Those who have obtained private plots and also those who have "lost" them complain regarding the "stinginess" of the local organs. "The city of Nebit-Dag -- the capital of the oil workers of Turkmenia -- is located in a desert area where

there is an ample amount of free land in the vicinity" stated several residents in their letter, "but nevertheless the city's leadership is delaying in every possible way the allotment of plots. Meanwhile, many wish to raise animals on private plots and thus supply their families with meat."

There has been much criticism concerning the fact that the land tracts being made available are in areas that are unsuitable from the standpoint of transport. The system for allotting land to enterprises, organizations and institutes for collective horticulture must be simplified. The number of references, visas and agreements required is so great that the establishment of the legal status of a new horticultural association often drags out for several years.

But let us say that a horticultural association has been established. Does this mean that its members no longer have any problems confronting them? They are only beginning. Some executive committees of local soviets and the leaders of enterprises and professional trade organizations do not display any special enthusiasm in creating collective gardens and they consider their work to be completed just as soon as the land is allotted. For example, when the members of a horticultural association appealed to the director of the Ukrzapadugol' Association for assistance in acquiring materials, they were informed as follows: "We have no materials for you. Please do not come to us in the future." A visit to the territorial committee of the professional trade union also turned out to be unproductive. A member of the horticulturist society in Novovolynsk, F. Chuyko, reported that the chairman of the municipal soviet turned his back on the horticulturists.

And certainly the miners are quite justified in expecting to receive assistance. The land tracts allotted to a majority of them are swampy. It is very difficult to convert such unsuitable land into flowering and fruitful tracts. But someone is tasked with spreading shaft rock, obtained from the dumps, upon the roads leading to the cottages. In like manner, someone is given responsibility for organizing the land reclamation work and for ensuring that electricity is brought into the plots. It is not surprising to learn that many miners, in their fourth year, are still unable to commence developing their plots.

Meanwhile, the citizens are under an obligation to make proper use of the plots made available to them. The state furnishes the land free of charge and it is interested in ensuring that it does not lie idle but rather produces a profit, if only in the form of products to be used by the owner for personal consumption. But when the fledgling horticulturists are left on their own, the management of their private plots proves to be all too difficult.

At the Moscow Hard Alloy Combine imeni S.P. Solov'yev, I held a discussion with members of the recently organized Almaz Horticultural Association. In the settlement of Mel'dino in Dmitrovskiy Rayon, land was provided to 75 individuals. And many of them, after having experienced the initial joy of acquisition, are now sadly recognizing the fact that they have embarked upon a very risky enterprise. Two hours by electric railway, later a ferry across the Canal imeni Moskva and 5 kilometers on foot. But they are depressed not only by the 120 kilometers that they must traverse over a difficult route. This is only one half of the problem. These deserving workers, imbued with a high level of conscientiousness and accustomed to order, are at a loss over the fact that their concern over their

plots is bringing them face to face with such elements as disorganization, lack of attention and self-seeking endeavors.

"In March 1980" related an electrician at the Central Laboratory for Measurement Equipment, G. Bulkina, as she discussed her trying experiences, "I purchased a small house at a timber-trade base in Kimry, with the transporting of the materials left up to the purchaser. I had to go out onto the highway and "bargain." One driver consented to deliver the panels to the site for 150 rubles. Moreover, he dropped them at the entrance to the tract inasmuch as there was no road. The next morning I rented a tractor for 100 rubles. Subsequently, several hundred more rubles were expended just as rapidly. For the shipment of glass from a thrift store, which became broken enroute. For transporting doors, boards and slate from the timber-trade base and for a bulldozer to remove sedge from the plot. And indeed there were many large expenses. I gave 400 rubles to "finishers" for laying the foundation and 1,000 rubles for assembling the panels. For the most part, I spent the entire loan obtained for developing the plot and also the vacation money put aside for my husband and me. And what did we gain? The shell of the house stands in water and several trees and shrubs are growing."

But, strange as it seems, many horticulturists envy such a fate. Nevertheless the worker succeeded in obtaining her finished paneled house. A house which others can only dream about. According to the chairman of the Moscow Voluntary Society of Horticulturists P. Sokolov, during the past 2 years 104,000 more garden plots were added to the 200,000 already in the Moscow region. Yet the garden buildings are being allocated in such a miserly number that it will be 60 years before they are made available to all those desiring them. Yes and where can more be obtained if, according to information supplied by USSR Mintorg /Ministry of Trade/, the enterprises of USSR Minlesbumprom /Ministry of the Lumber and Paper Industries/ and other departments produced only 6,177 garden buildings against a requirement for 170,000.

Convinced that it is almost impossible to obtain a plant produced house, many owners of garden plots ask where they can procure construction materials. This would be a naive question if the work was properly organized. Stores of state and cooperative trade and bases of the administration of Soyuzglavtara /Main Administration for the Repeated Use, Supply and Marketing of Packaging Materials/ of USSR Gossnab, where wood, boards, roofing and other construction materials are sold, are to be found in almost every rayon. But the horticulturists do not turn to the editorial board because they are not aware of this but only because they are unable, with rare exception, to locate them according to their official addresses. And violations occur quite often in the sale of deficit materials. "I saw the boards which I needed in a storehouse of the raypotrebsoyuz in Naro-Fominsk" stated Moscow resident B. Timonin, "But, as it turned out, the boards were not being sold here to just anyone, but only according to official entitlement."

In view of today's demand for items of cottage architecture, it is too much to expect all installations on a plot to be erected within the acceptable periods by the rayon construction office. Thus the owner of land, one way or another, arrives at the thought: if the construction materials cannot be purchased, they must then be "obtained." And thus an amateur horticulturist is transformed into an amateur foreman-dodger. On the one hand, he concludes agreements with business-like individuals at construction sites or at a building undergoing repair work. And on the other -- he arranges short-lived transactions with motor vehicle drivers who

service the construction site, who for the sake of a "bottle" will provide him with a dozen or so bricks, boards or logs. Indeed, conditions still exist for "kind uncles" warming their hands at the expense of the state. As acknowledged by the Deputy Minister of the USSR Industry of Construction Materials, N. Kabanov, 13-17 percent of the cement and 30 percent of the glass turns up missing at construction sites today. The expenditure norms for other materials are also too liberal and this gives rise to squandering of the materials.

Under conditions involving a weak logistical base and poor organization of cottage construction, the most inscrutable means are employed for providing the owner of a garden plot with a small house. When a suburban settlement is built on a green tract of land, the workers attached to the executive committees responsible for exercising control over the activities of horticultural associations are left in a state of amazement. In Istrinskiy Rayon, for example, there were 166 incidents of violations of the construction norms established by an order of Gosgrazhdanstroy. Here there were excesses in the selection of materials, since they were obtained by various means, the dimensions of the buildings were overstated and the cost of the garden projects was incredible.

Moreover, the specialists were not the only ones left wondering over the fruits of the architectural-construction anarchy. Upon leaving the city, each one of us automatically focused attention on the mass of garden structures which rudely interferes with the smooth symphony of the suburban landscape. Houses, villas and almost castles appear to mingle with the barns and cottages. Yet there are rules for landscape architecture.

Aware based upon his own experience of the cost of building a home, the proprietor of a tract nevertheless paves the way for his agricultural products, to which end he shifts all effort over to tilling the land. But he cannot obtain a harvest with his bare hands and thus he begins to look for the addresses of stores which sell horticultural-gardening instruments. And instead of tilling his land, he once again takes up his pen. "I am 68 years of age" writes Comrade Zhdanov in a letter addressed to the editorial board from Odessa, "in my youth I worked with wooden plows and shovels. It would seem that modern equipment should have become available recently for use on private plots. But at the present time, one cannot even purchase a road shovel."

Truly, there is a shortage of shovels. According to information supplied by USSR Mintorg /Ministry of Trade/, the difference between the number available on the market and the actual requirements -- 3 million shovels. Enterprises of the Ministry of Ferrous Metallurgy, which produce the principal bulk of these implements, make no distinction between a garden shovel and a general purpose shovel. They are both made out of low quality steel and quite often without handles.

A manual, cutting soil cultivation instrument and gardening implements are produced by 400 plants of 58 ministries and departments. During the Tenth Five-Year Plan, they produced 73 million rubles worth of these items, that is, an increase in production of almost twofold. But it is accurate to state that nobody can say which implements are in short supply and which are available in large quantities, since the accounting is carried out only on the basis of cost. To a certain degree, the unsatisfied requirements_come to light only following a wholesale fair, at which time Tsentrosoyuz /USSR Central Union of Consumers'

Societies/ and USSR Mintorg, after summarizing the supply, send "deficit" notices to the Ministry of Tractor and Agricultural Machine Building, which is responsible for the production of manual and mechanized horticultural-gardening implements. But for 1981, for example, USSR Mintorg, even from a cost standpoint, had data available on the production of implements for the private economy only from one half of the ministries and departments.

In the decree of the party and government concerning additional measures for increasing the production of agricultural products on the private plots of citizens, it is written: "Based upon requests by the USSR Ministry of Trade and Tsentrosoyuz and commencing in 1982, USSR Gosplan will examine the tasks for the production of horticultural-gardening implements and small-scale equipment, in the nomenclature and volumes required for satisfying the needs of the population." This still has not taken place. For 1982, USSR Gosplan called for a production volume of 94 million rubles. Even in terms of money, this is 50 million rubles lower than the requirements of USSR Mintorg. But, even more important, these rubles once again conceal those critically short items of horticultural and gardening equipment which USSR Mintorg has for several years been vainly trying to "force" into the plan. Once production is oriented towards the ruble, specific items will not be mandatory.

However, if serious thought is given to increasing the role played by the private plot of a city-dweller in the production of agricultural products, then one fact continues to be rather disturbing -- a requirement will still exist for discussing the need for producing the required number of horticultural-gardening implements. A spring day provides feed for the entire year. It is noted that despite the fact that the 1st and 2d of May are holidays, every horticulturist in central Russia necessarily goes out to his garden plot with his family on these days. Each knows that this is a good time for sowing the vegetable crops. Postponing the sowing campaign to the 9th of May -- will result in losses in both the early and gross harvests. And how can the work be completed in just 2 days if the only equipment available is a shovel?

"It is gratifying to read and hear that the private economy is a matter of general concern and benefit" stated a resident of Kaliningradskaya Oblast, I. Vasil'yev, in a letter addressed to the editorial board, "but here is one circumstance which for one reason or another has been relegated to the background. I have in mind the production of light mechanization equipment for agricultural operations. Over the radio, I have heard references to motorized units. However, upon making inquiry in this regard at trade organizations, I was informed that no deliveries of this equipment are planned for Kaliningradskaya Oblast during 1982. Where and when is it possible to purchase such equipment?"

At an exhibit pavilion of the All-Union Scientific-Research Institute of Agricultural Machine Building, I was shown equipment the likes of which lights up the eyes of all those having private plots. This included motorized units developed by the Kutaisi State Special Design Bureau for Miniature Tractors and Implements and by the Minsk Tractor Plant. The weight of one was 113 kilograms and another -- 151 kilograms. The power rating -- 5-7 horsepower. Sets of implements were available for them -- field wagon, cultivator, hiller, mower, single-bottom swivel plow, root crop digger, rotary cultivator and sprayer. Here, on the stands of this exhibit, it was possible to appreciate the economic effect to be realized from the use of this equipment on private plots and also in agricultural production. Labor expenditures can be reduced by 30 million man-hours

annually and more than 80 million light-contour, hilly, mountainous and other almost inaccessible (for traditional agricultural equipment) tracts of land can be placed in use.

Following such reassuring prospects, it is indeed sad to overhear comments by the institute's workers regarding the fact that the equipment shown constituted only experimental models. When will the mass production of such long-awaited equipment be organized? Instead of a reply, we are shown a decision handed down during the All-Union Scientific-Technical Conference on the Problems Associated With the Creation and Development of Light Mechanization Equipment, which took place in October of last year. Here is what was written down there: "The solution for the scientific-technical problems associated with the creation of light mechanization equipment for agricultural operations is dependent first of all upon how soon power engineering equipment will be introduced into the national economy: a range of internal combustion engines having a power rating of from 1 to 10 horsepower, miniature electric motors having power ratings of 0.1-3 kilowatts and effective self-contained power supplies."

The horticulturists ask when will this take place. We quote further from the decision handed down during the conference: "The USSR State Committee for Science and Engineering is requested to task Minavtoprom /USSR Ministry of the Automobile Industry/, Minelektrotekhprom /Ministry of the Electrical Industry and Power Engineering Machine Building/ and other industrial ministries, jointly_with Minsel'khozmash /Ministry of Tractor and Agricultural Machine Building/, with accelerating the carrying out of measures directed towards developing designs and creating capabilities for the production of self-contained power supply units for light mechanization equipment and other component items."

But whereas such an authoritative meeting requests that concern be displayed for the equipment used on private plots, the rank and file horticulturist communicates his concerns in a very clumsy manner. And it can generally be asked why is it that he acts in such a timid manner, when he is quite justified in not only requesting but even demanding? Really, in the absence of procrastination is an allotted sector of land, the organized sale of construction materials and the supplying of equipment for garden buildings -- is all of this to be viewed just as a personal whim on the part of a horticulturist? No. These conditions are required in order to ensure that the private economy does its part towards increasing the country's food resources. The farm is private in nature, but its importance is of public concern!

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CREDIT TERMS FOR KIRGHIZ PRIVATE PLOTS SPELLED OUT

Frunze SEL'SKOYE KHOZYAYSTVO KIRGIZII in Russian No 12, Dec 81 pp 42-43

[Article by Ye. Mukin, deputy manager of the Kirghiz Republic Office of Gosbank]

[Text] In accordance with the decisions of the 26th CPSU Congress, a food program is being carried out in the country whose purpose is to provide the population with high quality food products. The program has the task of unifying the development of agriculture and the industrial branches which service it, the procurement, storage, transportation, and processing of agricultural output, and the development of the food industry and of trade in food products.

The private subsidiary farms of kolkhoz workers, workers, and employees are an important support for the solution of the food program. Attributing great importance to this question, in January of this year the CC CPSU and USSR Council of Ministers adopted the decree "On Additional Measures to Increase the Production of Agricultural Output on the Private Subsidiary Farms of Citizens."

This document provides for a number of measures to improve the conditions for the running of personal subsidiary farms by kolkhoz workers, workers, employees and other citizens and for increasing the interest in this of the kolkhozes, sovkhozes, and other agricultural enterprises. In particular, it has been permitted that sovkhozes and other agricultural enterprises and recommended that kolkhozes conclude on a strictly voluntary basis contracts with kolkhoz workers, workers, employees, and other citizens living on their territory and conscientiously participating in public production, and also with pensioners, for the raising and purchase of livestock and poultry, and also for the purchase of surplus milk. The payment for the output purchased on the basis of these contracts is performed at prices in accordance with the agreement, but not higher than the established state procurement prices. Gosbank USSR provides kolkhozes, sovkhozes, and other agricultural enterprises with short-term credit for the payment of kolkhoz workers, workers, and employees for the livestock and poultry raised by them on their private subsidiary farms on contract terms, regardless of the state of payments for previously issued loans.

Payments for purchased livestock and poultry are made by the farms with cash through their cashier offices, or, at the desire of citizens, by means of postal money transfers, or transfers to savings accounts.

In order to verify the correctness of the payments Gosbank institutions have the right to demand from the farms the presentation of the reception-delivery documents for the purchased livestock and poultry, and also to carry out a preliminary, before the issuance of money, check of their reliability.

The livestock, poultry, and milk surpluses purchased by kolkhozes, sovkhozes, and other agricultural enterprises from the population are sold by these farms to the state and are credited to their production volumes and to their fulfillment of the state plan for agricultural output procurements, with the payment of the established additions for quantitative and qualitative indicators.

At the present time Gosbank institutions have the right to grant kolkhozes, sovkhozes, and other agricultural enterprises short-term credit for the issuance of advances to kolkhoz workers, workers, and employees for the purchase of the tools, materials, and local mechanization necessary for the production of agricultural output on a contract basis, in the amount of 50% of the contract.

The loan payment schedules are established on the basis of the contracted times for the receipt of output on the farm. In making payments for delivered output kolkhozes, sovkhozes, and other agricultural enterprises are obliged to withhold previously issued advances from the amounts due to citizens.

In accordance with the legislation in effect, kolkhoz workers, workers, and employees who do not have cows are granted credit by Gosbank institutions in the amount of 500 rubles for their purchase and 250 rubles for the purchase of calves with a five year repayment period for the credit issued for the purchase of the cows, beginning with the second year, and for the purchase of calves, beginning with the third year after credit is obtained.

Thus, in 1980 Gosbank institutions issued 793,000 rubles worth of credit for the purchase of livestock, and in the first half year of 1981--406,000 rubles.

It is permitted for sovkhozes and other agricultural enterprises and it has been recommended that kolkhozes, in agreement with trade union committees, repay loans on the basis of monies from the economic stimulation front up to 50% of the Gosbank credit granted for the purchase of cows and calves to workers and employees who conscientiously work at these enterprises, teachers and doctors who live and work on the territory of these enterprises, and also to pensioners who for a long time worked at these enterprises.

In order to develop horticulture, since 1981 workers and employees who are members of horticultural associations have been granted credit for the purchase or construction of garden buildings and for the improvement of garden plots in the amount of 3,000 rubles with repayment over a period of 10 years beginning with the third year after the credit has been received. In the past this credit had been issued in the amount of 1,000 rubles with repayment in five years.

In 1980 the republic's Gosbank institutions issued 38,000 rubles in credit for the construction of garden buildings, and in the second half year of 1981--45,000 rubles.

Credit for these purposes is issued to the workers and employees of cost accounting enterprises and organizations with guarantees from these enterprises, and to the workers and employees of budget institutions and also to pensioners by the institutions of Gosbank with their own personal guarantees. The issuance of credit to cost accounting enterprises, organizations, and individual borrowers for the purchase or construction of garden buildings and for the improvement of garden lands is performed with cash or book entry for the payment of the bills of trade organizations for the prefabricated buildings and construction materials being purchased. Gosbank institutions exact from borrowers .5% interest for the use of these loans, while for overdue payments 3% interest is added for the overdue time. Enterprises and organizations which have obtained loans for members of horticultural associations are obliged, no later than 12 months after the receipt of the loan, to present the Gosbank institution with a report on the expenditure of the monies which they have received. Since at the present time members of horticultural cooperatives are granted credit of up to 3,000 rubles, the members of these cooperatives who received loans on the basis of the previously operating procedure (1,000 rubles for a period of five years) can be issued an additional loan on the new terms of up to 2,000 rubles with repayment in 10 years beginning with the third year. The indebtedness on the old loan is not rewritten.

Thus, in granting credit for the construction or purchase of garden buildings and for the improvement of garden plots, and also for the purchase of cows and calves the republic's Gosbank institutions are thereby promoting the realization of the food program mapped out by the 26th CPSU Congress.

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AGRICULTURAL MACHINERY AND EQUIPMENT

UDC 631.354.2

HINDRANCES TO OPTIMUM UTILIZATION OF NIVA, KOLOS COMBINES SET FORTH

Krasnodar SEL'SKIYE ZORI in Russian No 12, Dec 81 pp 33-34

/Article by I. Kravchenko, director of the North Caucasian Machine Testing Station, P. Sidyachenko, senior engineer, and N. Oleynik, economic agronomist, Zernograd, Rostovskaya Oblast: "To Increase the Reliability of Combines"/

/Text/ The combine pool on farms in North Caucasus has been growing year after year. Nevertheless, the volume of grain yield per machine remains at the previous level, that is, on the average, 3,700 quintals in 1976-1977, 4,000 quintals in 1978-1979 and 3,900 quintals in 1980-1981. In connection with this it is very important to ensure a reduction in the downtime of grain combines for technical reasons. The promptness and quality of harvesting of the grown crop depend to a considerable extent on the solution of this problem.

Inspections of Niva (SK-5) and Kolos (SK-6) grain harvesting combines were made at the North Caucasian Machine Testing Station for 6 years in succession (1976-1981). It was disclosed that the number of defects in SK-5 combines depending on their manufacture and assembly at plants during this harvesting season was reduced by 25 percent as compared with machines of the 1976-1978 output. However, in the SK-6 combine the same shortcomings still remain and their number is 1.3 times as high as in SK-5.

The following were the main production shortcomings of Niva and Kolos combines during all these years: weak tightening of body bearing linings on shafts of threshing drums (SK-6), the straw shaker and the gleanings auger, as well as of bolts for fastening the bars of threshing drums (SK-6), pickup rakes, fingers and the finger bar of cutting apparatus and header auger fingers; jamming of pickup wheels with rakes and of strawwalkers against each other and against thresher panels; incompleteness of various units and subassemblies.

The hydraulic system of these combines accounts for a large number of shortcomings (oil leak in the joints of pipes in the steering system and of hopper vibrators and the presence of foreign substances in oil).

The basic failures in SK-5 and SK-6 combines in 1976-1981 were distributed as follows: in the pickup-oil leak in the reducer joint and break in the welding of wheel fastening brackets (SK-5, 5.6 percent and SK-6, 3.4 percent of the total number of failures); in the reaper--fracture of the hubs of driving and driven variable speed pulleys and rupture of the variable drive belt (SK-5, 21.5 percent

and SK-6, 16.3 percent); in the thresher--rupture of drive belts of the reaper, main countershaft and drums, misalignment of the strawwalker, break of the wires of sensors of the grain loss indicator in walkers and falling out of the keys for fastening the sprockets of gleanings and grain augers and of the intermediate beater (SK-5, 30.1 percent and SK-6, 45.4 percent); in the hydraulic system--rupture of packing rings, rupture in the body and tear out of hoses from the attachment, wedging of the piston of the overflow section of the sectional distributor and of the piston of the safety valve (SK-5, 17.3 percent and SK-6, 16.7 percent); in the running gear--rupture of drive belts and destruction of driven clutch disk facings (SK-5, 13.1 percent and SK-6, 10.8 percent); in the engine--oil leak under rubber branch pipes of the oil radiator and fuel leak from the nozzle seal (SK-5, 12.3 percent and SK-6, 7.2 percent).

Furthermore, grain combines had such serious failures as destruction of the body and wear of the teeth of the transmission gear box and cracks in the body of the differential gear.

The inspection of SK-5 and SK-6 combines showed that the automatic thresher loading regulator was not used in the automatic mode in any machine under observation. Wire rods of the sensors of the automatic thresher loading regulator were not installed in a number of combines. The hydraulic cylinder of the running variable speed drive was connected to the sectional distributor of the hydraulic system. These errors are due, first, to the inability of combine operators to correctly adjust and operate the instrument and, second, to the insufficient reliability of the units of the automatic thresher loading regulator (wedging of the distributor valve, disconnection of the sensor shaft and tear out of wire rods from the attachment).

The situation with the use of the grain loss indicator in combines is similar. The introduction into its structure of a plug connection to the electric network of combines has contributed to the fact that the measuring unit and indicating instrument of the grain loss indicator are joined in all the inspected combines (in 1976, 62 percent and in 1981, 100 percent). At the same time, not a single machine in which the readings of the indicating instrument are used to control combine grain losses has been found. The need to reset the instrument when there is a change in the agrotechnical background, harvesting conditions and types of harvested crops is the main reason for this. The brevity of harvesting does not enable the combine operator to promptly and accurately adjust the instrument. It happens that during assembly at a plant the terminals of wires of piezosensors in walkers and in the screen unit are not tightened firmly, as a result of which the instrument does not operate. There are also breaks of wires of piezosensors in walkers. In connection with the fact that malfunctions occurring in the grain loss indicator do not affect the technological process performed by combines, machine operators do not eliminate them.

In the last few years machine testers and designers have had to listen to many unflattering words. It is no coincidence that the 26th CPSU Congress set the task of developing the design and embarking on the output of a highly productive grain harvesting combine, which in its technical and economic indicators meets modern requirements. The personnel of the Rostov Agricultural Machine Building Plant and the Taganrog Combine Plant are working on the solution of this problem.

At the Rostov Agricultural Machine Building Plant the SK-5A combine has now been reconstructed and its series output has begun. The new combine has a higher productivity and is more reliable than the SK-5 and SK-6 series machines.

Significant structural changes have also been made in SK-5 and SK-6 combines, which has increased their reliability. The coefficient of readiness of Niva rose to 0.93 and of Kolos, to 0.92, the standard coefficient according to specifications being 0.95.

We hope that design bureaus and manufacturing plants will approach the modernization of combines with full responsibility and in the very near future will give highly productive machines reliable in the full sense of the word to rural areas.

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TILLING AND CROPPING TECHNOLOGY

DEVELOPMENT OF GRAIN CROPPING TECHNOLOGY IN OMSKAYA (BLAST DISCUSSED

Moscow IZVESTIYA in Russian 28 Nov 81 p 2

/Article by S. Manyakin, first secretary of the Omskaya Oblast Committee of the CPSU: "Stable Harvest Must A'so Be Grown in Difficult Weather"/

/Excerpts/ In his speech at the November (1981) Plenum of the CPSU Central Committee Comrade L. I. Brezhnev said that "so long as we have not learned to command nature, work in agriculture must be more skillfully adapted to climatic adversities. This presupposes stricter regional specialization. This presupposes the introduction of crops and agrotechnical methods ensuring good harvests when there is both a shortage and an excess of moisture." Such an approach to work is especially necessary for our Siberian conditions.

The vast plain expanses of the Omsk Irtysh area include the northern taiga zone, the forest steppe--northern and southern with a great number of small lakes, swampy lowlands and birch groves--and hundreds of square kilometers of southern steppes adjoining the virgin land of Kazakhstan. On these expanses there are almost 4.5 million hectares of arable land, which scientists include in the "risky farming" zone. Here, as is expected of Siberian winter, winter is frosty and long and, as a rule, summer is hot and dry. In southern regions the annual precipitation norm usually does not exceed 200 to 300 mm. In 1961-1965 the average grain harvest totaled 6.6 quintals per hectare and during the subsequent five-year plan, 10.2. Of course, this is also bread, but it was no longer possible to be satisfied with such indicators, considering the risky farming formula convenient for some people.

The development of grain farming became the shock section of work of the oblast party organization. An integral scientifically substantiated farming system developed by scientists at the Siberian Scientific Research Institute of Agriculture and at the Omsk Agricultural Institute and by specialists at the administration of the oblast executive committee began to be introduced successfully at the end of the Ninth Five-Year Plan.

The Omsk system is based on the application of fallow grain crop rotations with a short rotation, on soil protective land cultivation technology and on the utilization of highly productive varieties of grain crops adapted to the "surprises" of the Siberian climate, which have been developed in the oblast.

The high efficiency of clean fallow in Siberia has been known for a long time. IZVESTIYA also wrote about this often. Clean fallow is a decisive link in the restoration of soil fertility, moisture accumulation and weed control. It has become the basis for agronomic policy in the oblast. With the expansion of its areas the harvests and gross yields of grain and fodder have been growing steadily. In the oblast in the last 2 years of the last five-year plan the average harvest on clean fallow was 23 quintals per hectare, on the Nizhneirtyshkiy and Yubileynyy pedigree stock farms, 34.7 quintals, on the Kolkhoz imeni Lenin in Lyubinskiy Rayon, 33.9 quintals and on the Zavety Lenina Kolkhoz in Muromtsevskiy Rayon—and this is already the northern forest steppe—32 quintals.

According to the condition of clean fallow one can judge the attitude of the manager, agronomist and the entire collective to land. If fallow is overgrown with weeds, this means that mismanagement flourishes on this farm. Exemplary clean fallow is a testimonial to the maturity of the grain grower.

Of course, other factors also had an effect on the growth of harvests in the oblast, but clean fallow is the background that determines the efficiency of application of all other advanced agricultural methods, primarily soil protective technology based on subsurface and minimal land cultivation. Stubble seeders and special soil cultivation implements developed at the Siberian Scientific Research Institute of Agriculture, that is, plankers /shelevateli/, snow compacting rollers, high-speed antierosion cultivators and notch seeders, are widely used there. Incidentally, notch seeding is carried out on a large scale in the oblast.

In the last few years breeders have offered a number of new intensive-type grain varieties for introduction. They are Omskaya-9, Almaz and Novosibirskaya-67 wheat, Tselinnyy barley, Risto oats and others. Now they occupy more than 1 million hectares. In our main farming regions—steppe and southern forest steppe zones—where two-thirds of the arable land are located, the new varieties are placed on one-half of the area. On farms in these zones during the past five-year plan the annual harvest averaged 16.1 quintals per hectare. Of course, this figure will also become a past stage in a few years. The achievements of the Novoural'skoye Experimental Farm attest to the potentials of Siberian farming. During the 5-year period from an area of 20,000 hectares grain output averaged 23.3 quintals there and in 1980, 32 quintals.

Grain production in the Omsk Irtysh area is highly profitable (65 to 80 percent). In 5 years 300 million rubles of profit were obtained from its sale. The yield of other plant products, especially vegetables and potatoes, also rose.

Fodder production increased by 25 percent during the 5-year period. It is very important that this was attained with a reduction of 200,000 hectares in the areas of fodder crops. Fodder production is becoming an independent sector. Young large-horned cattle weighing 418 kg is sent for slaughter. During the 5-year period milk yields increased by 112 kg. A total of 1.8 tons of grain, 85 tons of meat (in carcass weight), 684 kg of milk and 280 eggs were annually produced per capita in the oblast. Omsk grain growers gathered the highest average harvest in 1979—17.9 quintals per hectare—and gross output was 4.2 million tons. More than 2 million tons of grain were placed in the homeland's bins for the first time.

A great deal has also been done in the oblast to improve grain quality. Whereas during the Ninth Five-Year Plan, on the average, 11,000 tons of wheat meeting the standard of strong wheat were procured annually, in 1976-1980, on the average, 220,000. During the 10th Five-Year Plan 50,000 tons of durum wheat, 1.1 million tons of strong wheat and 2.8 million tons of valuable wheat were delivered to the state. Furthermore, more than 900 tons of varietal seeds were shipped. For the high quality of grain sovkhozes and kolkhozes additionally obtained 93 million rubles.

During the current year, despite the difficult weather conditions, 335,000 tons of strong wheat, 309,000 tons of valuable wheat and 30,000 tons of durum wheat were procured. Furthermore, 323,000 tons of varietal seeds were sold to the state.

This year's severe drought involved most rayons in the Omsk Irtysh area. Nevertheless, the harvest turned out to be comparatively satisfactory. We have once again become convinced that we can resist the element successfully if we strictly adhere to the zonal farming system. In Isil'kul'skiy Rayon the last rain fell on 24 June, but the harvest was 18.7 quintals of grain per hectare. Clean fallow occupies 15 percent of the arable land there and significant areas have been assigned to the new varieties.

I would also like to cite another example, when a harvest of 10 quintals was obtained under conditions under which previously even seeds could not be gathered. In the winter of 1980-1981 on the Sibiryak Sovkhoz soil entered winter with a moisture reserve of 80 mm in the meter layer on fallow and of 40 to 60 mm on other fields. In winter snow retention was carried out twice and by spring 140 mm of moisture were accumulated on fallow and 80 to 90 mm on other fields. Of course, rain was needed, but from 10 April through 19 August there was no drop of rain. In summer the temperature of the surface soil layer reached 50 degrees during day hours. However, the plants withstood this and produced 1 ton of grain per hectare, 70 percent of the grain being strong and the rest, valuable.

Sibiryak obtains 40 to 45 percent of the gross grain output from fallow fields. Such an indicator should also be attained throughout the oblast in the next few years. Clean fallow now occupies 700,000 hectares—this is 16 percent of the entire arable land. The oblast's farmers set for themselves the task of increasing gross grain output to 4.2 or 4.5 million tons during the 11th Five-Year Plan. This means that farms in the main grain rayons of the Omsk Irtysh area should gather 18 to 22 quintals of grain, or—and we are ever more often talking about such an indicator—no less than 1 ton per hectare of arable land.

The extremely dry weather in the summer and fall of the current year produced an excessively deep soil desiccation. Under the conditions that have been created, on the basis of the accumulated experience in the introduction of the zonal farming system, specific measures making it possible to significantly lower the negative consequences of the drought have been developed and are implemented on farms. Carefully prepared clean fallow, which contains twice as much moisture as the fields that were occupied by agricultural crops, will help. The plan for the plowing of fall areas has been fulfilled. We now have 1.5 million hectares of "subsurface" fall area. A total of 91 percent of the seeds of grain crops have been brought up to high sowing quality requirements. A total of 5,800,000 tons of organic fertilizers have been carted out to fields. This is almost 1 million tons more than last year. Equipment is being repaired at higher rates. Special attention will be given to the maximum accumulation, retention and efficient utilization of moisture.

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TILLING AND CROPPING TECHNOLOGY

IMPROVED SEED PREPARATION FOR SPRING SOWING URGED

Moscow PRAVDA in Russian 3 Feb 82 p 1

/Article: "Basis for Future Harvest"7

Text/ Many kolkhozes and sovkhozes are preparing for the sowing campaign in an organized manner. They are completing the repair of equipment and the cleaning of seeds, storing fertilizers and mastering the experience of advanced workers. Comrade L. I. Brezhnev noted at the November (1981) Plenum of the CPSU Central Committee that, in order to successfully cope with the programs of the second year of the five-year plan, it was necessary to perform the entire set of operations for the production of a high harvest on schedule and in a quality manner.

Rural workers received the decree of the CPSU Central Committee and the USSR Council of Ministers "On Additional Measures for the Preparation for and Performance of Spring Field Operations in 1982" with great enthusiasm. They consider it new evidence of the party and government concern for the further development of agricultural production. Providing farms with high-quality seeds and planting stock, completing their preparation and bringing them up to high sowing quality requirements are among the important measures envisaged by the decree. Attention is drawn to the utilization of all the available seeds of new regionalized and premising varieties and hybrids and of the grain of peas and other pulse crops suitable for sowing for fodder purposes.

The necessary quantity of seeds was laid in promptly on most kolkhozes and sov-khozes. Grain growers in Belorussia, Latvia and many oblasts of the Russian Federation and Kazakhstan have good seed stocks. True, this is not the case everywhere. Farms in Uzbekistan and in Ryazanskaya, Kirovskaya and other oblasts are not yet fully provided with seeds. First of all, there is a shortage of rice, buckwheat, sunflowers, grain legumes and other crops. Agricultural bodies and managers and specialists of kolkhozes and sovkhozes should see to it that seed stocks are replenished. It is necessary to speed up exchange operations and to additionally select the best commodity grain for sowing.

Of course, the quality of seeds is the chief thing. Now their preparation is proceeding in a more organized manner. In a number of rayons it was or is being completed. For example, Lithuania's farmers have conditioned all the grain stored for the sowing campaign. It corresponds to the first and second standard category. Work on seed preparation is organized efficiently on many kolkhozes and sovkhozes in the Ukraine, Kazakhstan, Kurskaya and Omskaya Oblasts and Altayskiy Kray.

However, there is sluggishness here and there. For example, on farms in Ungenskiy and Kaushanskiy Rayons in the Moldavian SSR a considerable part of the pea seeds proved to be substandard. A great deal of grain is not yet ready for sowing on kolkhozes and sovkhozes in Issyk-Kul'skaya and Narynskaya Oblasts in the Kirghiz SSR. Many seeds do not correspond to the standard in Novgorodskaya and Pskovskaya Oblasts and Krasnoyarskiy Kray. The low quality of grain is connected with its dockage and increased moisture. Seed preparation must not be postponed to a later date. It is important to organize a smooth operation of cleaning and drying machines and to establish, where this is necessary, additional links of machine operators.

Workers at grain receiving organizations are called upon to give extensive help to farmers. They have sufficient grain cleaning and drying equipment. However, these capacities are utilized poorly. As a result, the quality of seeds kept by procurement officials is still low. For example, by the beginning of this year workers at grain receiving enterprises—the Pinsk Grain Receiving Enterprise in Brestskaya Oblast and at the Kalinkovichi Grain Receiving Enterprise in Gomel'skaya Oblast—have not brought a single kilogram of grain up to the first category. On the whole, almost one—half of the seeds at the disposal of procurement officials do not meet standard requirements. Only one—third of the corn is considered standard. In the very near future managers and specialists of grain receiving enterprises must introduce proper order in seed bins and organize an efficient utilization of machinery and equipment. They must remember that just like grain growers they are responsible for the future harvest.

Potato growers have a great deal of trouble these days. In fall it was not possible to store high-quality tubers for seeds everywhere. It is necessary to ensure their preservation and to avoid their spoilage everywhere. When necessary, farm managers and specialists should organize potato sorting and see to it that potato reserves are replenished.

Specialists of the state seed inspectorate give extensive help to rural workers in the preparation for spring. Sometimes, however, evaluating the state of affairs on one farm or another, they are not objective. Significant shortcomings in the work of Lenkoran' and Dzhalilabad seed inspectorates in Azerbaijan have been disclosed recently. They often violated state standards and checked seeds superficially and shallowly. Such an approach to this matter is intolerable. Ultimately, it can damage the harvest.

The 26th CPSU congress pointed out the need to improve the system of seed breeding, to accelerate its transfer to an industrial basis and to more rapidly introduce new varieties and hybrids into production. It is important to see to it that promising varieties adapted to local conditions are available in every zone. A great deal is being done here. Breeders annually transfer dozens of regionalized varieties of grain crops to production workers. Early ripening hybrids of corn, sunflower seeds and sugar beets have been developed. Scientific institutions and specialized farms must accelerate the reproduction of promising new varieties. The activity of the All-Union Production Association for Varietal Seed Raising and its subdivisions needs to be further improved. The fact that experimental and educational farms do not always cope with the assignments for the cultivation of elite seeds and at times deliver inferior-quality output to kolkhozes and sovkhozes must not be tolerated.

The days of the sowing campaign are approaching. The party organizations of kolkhozes and sovkhozes are called upon to energetically support the initiative in the competition for an exemplary preparation for spring and to see to it that every rural party member and every farmer work in a shock manner, devoting their knowledge and experience to the search for potentials for the growth of field productivity. To sow high-grade seeds on the spring wedge of every farm means to increase the output of agricultural crops, to raise the yield of the grain field and to sell more grain and other products to the state in the second year of the fiveyear plan.

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